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ABSTRACT

This report describes the proceedings of a regional conference held for educators and representatives of public and private agencies throughout the New England area. The sponsorship of the conference was shared by Sears Roebuck Foundation Project and the University of Wisconsin at Madison. The primary concern of this meeting was teacher training for Individually Guided Education (IGE). Also discussed were staff development, in-service training, preservice education, and the various organizations and agencies responsible for these functions. The goals of the meeting were to a) bring together outstanding educators from all levels of the educational system and b) promote collaboration among persons actively involved in teacher education and those involved in changing the social system. The appendixes to the conference proceedings present information on the Individually Guided Education Project League, microteaching, ERIC documents on competency-based teacher education and the Multiunit/IGE school, and a clinical workshop in Individually Guided Education. (Author/BRB)

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The Report of the

MERRIMACK EDUCATION CENTER'S

Conference on

NEW PARTNERSHIPS IN TEACHER EDUCATION

A Regional Invitational Conference

for

College and University Presidents, Education Deans, and Department Chairmen, Professors, State Department Personnel and Superintendents of Schools

November 28, 1973

Sponsored by the

SEARS-ROEBUCK FOUNDATION PROJECT

In Cooperation With

University of Wisconsin, Madison, Wisconsin

Conference Chairman
Dr. Leslie C. Bernal

Produced by

Merrimack Education Center
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Chelmsford, Massachusetts 01824

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Author: Sanders, Jean (Comp.)

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Sponsoring Agency: Sears Roebuck Foundation Project and University of Wisconsin at Madison

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ABSTRACT: This document reports a conference attended by representatives of various educational organizations from New England. The conference dealt with teacher education for IGE (Individually Guided Education); funds were provided by the Sears-Roebuck Foundation Project.
Conference goals were (1) to bring together outstanding teacher educators from all levels of the educational system; (2) to promote collaboration among persons actively involved in teacher education and those involved in changing the schools.
Topics discussed in this report include (1) conference goals, (2) continuing education needs (in-service); (3) diversity of resources and concerns for teacher education.

For purposes of this conference, "Partnerships in Teacher Education" is defined to include staff development, inservice training, and preservice education and the various organizations and agencies responsible for these functions.
This conference was attended by 150 guests and participants from universities, colleges, school systems, and public and private agencies throughout New England.

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Dr. Ronald Fitzgerald
Director, Massachusetts Advisory Commission on Education

Dr. Kenneth R. Seifert, Superintendent
Andover Public Schools

Dr. Robert Watson, Panel Chairperson
Director, Bureau of Curriculum Services
Massachusetts State Department of Education

FOREWORD

The goal of the conference on NEW PARTNERSHIPS IN TEACHER EDUCATION is to advance the National implementation of Individually Guided Education in the Multiunit school. Within this scope, the National implementation involves the University of Wisconsin Center for Research and Development, the Sears-Roebuck Foundation, local education agencies, State Departments of Education, and local school systems. The various organizations and agencies, interacting with teacher preparation institutions, are the primary agents for implementing concepts and practices of IGE (Individually Guided Education).

At present, school planners and decision makers are working with implementation at the local school district level and through cooperation in LEAGUES of school communities. State Department personnel, and facilitators from intermediate agencies, such as the Merrimack Education Center, assist the local school communities with awareness and adaptation of IGE products and practices through thirty-five identified outcomes, The development of IGE schools in local school districts is encouraged, facilitated, and maintained by the support systems available to them.

The SEARS-ROEBUCK FOUNDATION PROJECT seeks to improve the implementation of IGE in the following ways:

1. Provide professionals, through on-campus preservice and graduate level programs, who are prepared as IGE teachers, unit leaders, or principals.

2. Develop and maintain mechanisms for various organizations, agencies, and teacher education institutions to work cooperatively in the development of statewide IGE networks.

3. Identify possible roles for each of the various agencies to formulate complete statewide networks essential to make IGE a viable, self-sustaining, and self-renewing system.

The Conference on NEW PARTNERSHIPS IN TEACHER EDUCATION will also develop processed information packages for local school use compiled from sources of IGE/MUS educational developments and innovations. Still another primary trust of the conference is to develop an educational planning and management system to assist schools to make rational decisions about effective implementation of IGE/MUS.

Representatives of colleges and universities, in New England, the Massachusetts State Department personnel, and local school superintendents are pursuing mutual development objectives in the general area of "teacher preparation" be it pre-service or in-service. The one-day conference serves as a means of determining what the IGE schools need to improve their management competencies in regards to staffing, and what the various represented agencies are doing to meet these needs. It also serves as a forum for discussing how the agencies can work together to expedite the development of the teacher training component of IGE as an educational management system.

This report describes the purposes and proceedings of the conference, the various presentations of the invited speakers, and the means of interagency cooperation discussed by the participants. The interaction panel and the small group discussions have been summarized in the report, also. The Merrimack Education Center hopes that this report will prove useful as an indication of the planning and management of IGE Statewide Networks, and as indicative of developments taking place in organizational patterns and staff development in support of the IGE/MUS model.

The NEW PARTNERSHIPS Conference was presided over by Dr. Leslie C. Bernal and Dr. Richard J. Lavin of the Merrimack Education Center. MEC personnel who participated in the conference (Dr. Francis J. Pilecki, Ms. Kathy B. Adams, and Ms. Jean E. Sanders) assisted in conducting interviews with conference participants to gather information included in the descriptions provided in the compilation. In addition, Dr. Gregory Anrig, Dr. Ronald Fitzgerald, President James J. Hammond, and Mr. Walter H. Flinn are acknowledged for their contributions. Finally, special thanks are given to Dr. Lawrence A. Quigley, Dr. John Nash, Mr. Maurice Smith, Dr. Kenneth Seifert, Mr. Robert A. Watson, and Dr. Patricia Barbaresi, for their assistance in program preparations.

CHAPTER I

CONFERENCE GOALS

NEW PARTNERSHIPS in TEACHER EDUCATION

Approximately forty-five schools in Massachusetts have selected the organizational arrangement of the Multiunit School. This system enables schools to assess their potential for improving capabilities in instructional planning, in-service training for personnel, and improved decision making in order to more effectively plan and improve instruction.

At this point in time, it is necessary to initiate an interaction for contact with various educational agencies who are developing and improving their training programs for staff development...training programs at the pre-service and in-service level to improve competencies of school personnel. This report is a description of a major conference as one of MEC's efforts to effect inter-agency cooperation and establish a Statewide IGE network.

Since there are increasing numbers of organizations and individuals working to create viable systems and mechanisms by which schools can more effectively manage instructional programs, commonality exists among these various agencies in terms of their long-range objectives. A major purpose of this conference, then, is to bring these organizations and individuals together to initiate a dialogue for collaboration.

Goals for the Conference. The Merrimack Education Center has called a conference of representatives of educational organizations to create an exchange of information about these common purposes and activities. It is hoped that a Statewide Network can coordinate and facilitate further exchange through inter-agency collaboration. In this way, individuals and organizations could explore the possibility of forming a more or less permanent group, an "invisible college," for enhancing developments and implementation of Individually Guided Education in the Multiunit School.

The emphasis with the Interaction Panel and the Small Group Discussions is upon participation by those present who might discuss the implications of more extensive cooperative efforts, joint development and implementation strategies, as well as mutual objectives and activities. Long-range benefits of such collaboration could prove valuable to all agencies/ organizations in terms of effective utilization of resources and competencies of the various organizations identified.

Organization of this Conference Report

The information presented during the morning segment, along with the luncheon presentation, comprise the majority of the remainder of this report. Additional information garnered by the MEC staff through correspondence and interviewing has been compiled into program descriptions. Summaries of the panel presentations and the small group discussions also appear in this Conference Report. The appendix provides copies of materials disseminated at the Conference.

Agenda for the Conference

With this scope and purpose in mind, the following agenda was prepared for the one-day conference held on November 28, 1973.

MASSACHUSETTS SCHOOL SYSTEMS

WITH **IGE** Schools

MERRIMACK LEAGUE

Andover
Chelmsford
Fitchburg
Lawrence
Littleton
Methuen
Tewksbury
Tyngsborough
Westford
Wilmington

CENTRAL LEAGUE

Fitchburg
Keene (N.H.)
Leominster
Mansfield
*Uxbridge

NORTHEAST LEAGUE*

Burlington
Essex
Lawrence
Manchester
Tewksbury
Topsfield
Tyngsboro

SOUTHEAST LEAGUE*

Attleboro
Braintree
Brockton
Cohasset
Easton
Fall River
Foxboro
Mansfield
[illegible]

*The Southeast and Northeast Leagues are [illegible]

NEW PARTNERSHIPS
IN
TEACHER EDUCATION

A Regional Invitational Conference

for

College and university presidents, education
deans and department chairmen, professors,
state department personnel and superintendents
of schools

PROGRAM

8:45 A.M. .... Registration and coffee

9:15 A.M. .... Introductory Remarks

Dr. Richard J. Lavin, Executive Director, M.E.C.

9:30 A.M. NEW RELATIONS IN TEACHER EDUCATION: COLLABORATION OF THE COLLEGE AND THE COMMUNITIES

Dr. Allan W. Ostar, Executive Director, A.A.S. C.U.

Presiding: *Dr. Robert L. Randolph, President, Westfield State College*

10:30 A.M. .... Presentations

INDIVIDUALIZATION OF INSTRUCTION IN THE PUBLIC SCHOOLS—

HOW COLLEGES CAN HELP FACILITATE I.G.E.

Dr. Leslie C. Bernal, Associate Director, M.E.C.

SEARS-ROEBUCK FOUNDATION PROGRAM FOR COLLEGES AND I.G.E.

Dr. Herbert J. Klausmeier, Director, SRF Project, The University of Wisconsin

COMPETENCY-BASED PROGRAMS: UNDERGRADUATE AND GRADUATE LEVEL PROGRAMS

Dr. William Bechtol, Chairman, Education Department, Southwest Minnesota State College

Presiding: *Dr. Leslie C. Bernal, M.E.C.*

12:15 P.M. .... Luncheon

LINKAGES IN PRE-SERVICE AND IN-SERVICE EDUCATION PROGRAMS

Dr. Gregory Anrig, Massachusetts Commissioner of Education

Presiding: *President James J. Hammond, Fitchburg State College*

1:30 P.M. .... Interaction Panel

Mr. Walter H. Flinn, Trustee, Massachusetts State College System

Professors Klausmeier and Bechtol

Dr. Ronald Fitzgerald, Director, M.A.C.E., for the Governor's Commission of School District Organization and Collaboration

Dr. Kenneth R. Seifert, Superintendent, Andover Public Schools, Andover, Massachusetts

Presiding: *Mr. Robert A. Watson, Director, Bureau of Curriculum Services, Department of Education*

2:30 P.M. .... Small Group Discussions

PRE-SERVICE AND GRADUATE PROGRAMS IN INDIVIDUALIZATION

Dr. Lawrence A. Quigley, Vice-President, Fitchburg State College; Dr. Charles Lamontagne, Superintendent of Schools, Woburn, Mass.; Ms. Jean Sanders, M.E.C. Information Services; Professor Bechtol; Professor Klausmeier

COLLABORATION IN IN-SERVICE PROGRAMS

Dr. John Nash, Director, Continuing Education, Fitchburg State College; Dr. Francis J. Pilecki, M.E.C., Staff Development; Dr. Fitzgerald; Dr. Seifert

RECRUITING SCHOOLS AND FACILITATING LEAGUES OF SCHOOLS

Mr. Maurice Smith, Superintendent of Schools, City of Lawrence Public Schools; Dr. Patricia Barbaresi, Fitchburg State College; Dr. Bernal; Dr. Lavin

Presiding: *Dr. Francis J. Pilecki, M.E.C. and Fitchburg State College*

CHAPTER II

Conference Objectives

Welcome and Introductory Remarks

Richard J. Lavin
Executive Director
Merrimack Education Center

In this introduction to the conference, Dr. Lavin discusses multi-institutional and inter-organizational patterns fostered and nurtured through local collaboration. These collaboratives have involved teacher education institutions, local school systems, state and regional education agencies. This concept of collaboration and the formation of networks greatly extends the cooperative planning and maximizes the resources available for pre-service and in-service teacher education programs.

It's a privilege for me to welcome you all here to the Merrimack Valley to talk about teacher education. Driving in this morning, I was thinking about the news on the radio; the energy problems, the resource problems; the news isn't great as you listen to it. I thought about a saying that you may have heard that goes something like this, "Just when you think you can make both ends meet, somebody moves the ends."

I think today that we are going to attempt to move the ends; we are going to try to move the ends closer. The ends in this case are the parts of the educational system which perhaps aren't as close in the kinds of things they might do together. We thought that perhaps by inviting people to a conference like this we could begin to talk about ways that we can work together.

Our conference today is entitled, "New Partnerships in Teacher Education." When you came in today you received a packet of information and in that packet you will locate the program, that you might want to pull out of that folder and use as guidelines for the activities of the day. We are pleased to have so many people with us today. You represent over 50 different institutions and organizations, higher education institutions, private, public, intermediate agencies, state departments, all kinds of institutions that are interested in this area of improving teacher education.

I think also that the real part of teaching is found in both areas; the higher and lower education that is where the real education is occurring. We would like to use the conference today to be able to see that there are ways to get better utilization out of the limited resources we have in terms of trying to improve teacher education.

To begin our presentatio our focus will be on three basic goals or objectives. T se are the kinds of things we will try to accomplish dur g the time we have. We have excellent leadership peo e in the field of teacher education to assist us and I ink that by the time the day is over we will have had opportunity to provide you with a great amount of in rmation. But not only information in terms of aware ss of the need for doing more, but maybe some suggesti s of how we can work through the next steps. The jectives for the day are three:

1. Establishing pre-ser ce and graduate programs in individualization
2. Developing collabora on in in-service programs; and,
3. Recruiting schools a facilitating leagues of schools.

You will notice that the objectives are printed similar to this on the progra for the afternoon. The first objective, "Establishing pre- rvice and graduate programs in individualization." We ha with us Dr. Klausmeier from the Sears Foundation Project d he will devote a large part of the day to beginning to ta about the kinds of things that are happening. There wi be an opportunity for you at the end of the day to begi to follow up to think of ways you might be able to go rther.

The second objective, "D eloping collaboration in in-service programs." This basi lly related to how colleges and schools can collaborate o not only in-service education, but pre-service and in-servic education. We will begin to talk about how you can get fa ilities utilized, how we can use faculty together, and pro ably most importantly how we can keep the costs of this ki of service to the teaching profession at a very economic level.

And finally, recruiting hools and facilitating leagues of schools. Here the purpose will be to show how in each of your institutions, some of yo institutions are doing this at the present time, how each f your institutions can begin to recruit schools and work th leagues of cooperatives or collaboratives of schools wit in your area. We will try to give some information to you to how this might be accomplished. To assist us in reaching our objectives we are pleased to have the assistance of these teacher education leaders that I mentioned. And, I think it is important to say that the institutions that they represent are equally important, because what we are talking about is linking institutions. Not just people; but, linking institutions. We have institutions in almost a collaborative system here today forming some kind of a network. We have the institution of the American Association for State Colleges and Universities, with Dr. Ostar present; The Massachusetts State College system; the Massachusetts State Department of Education; the Merrimack communities, twenty-one communities with superintendents from the Merrimack Education Center. The Sears-Roebuck Foundation Project, the University of Wisconsin; the Southwest Minnesota State College with Bill Bechtol; Fitchburg State College; the Massachusetts Governors Commission for School Collaboration and School Consolidation; the Massachusetts Advisory Council on Education; private and public institutions from all over New England. Regional agencies, intermediate agencies, all interested in serving the school systems and the teachers within those systems. Through all of these cooperating agencies we are presenting this program today and we appreciate these institutions collaborating today and talking about improving teacher education.

Just a word about MEC. The Merrimack Education Center is a voluntary collaborative. It began in 1968 so it's roughly going into its sixth year. There is a case study done by Ronald Havelock from the University of Michigan at their Center for Research on Utilization of Scientific Knowledge (CRUSK). This case study basically documents a lot of the kind of thing that we're attempting to do as a collaborative and much of that is now being presented in a final document for dissemination purposes. We are going to make available some of that to you by mail. Out of that study, there are a couple of things that have a bearing on today's meeting.

First, the kind of framework that you use to look at collaboration suggests that there is a need being surfaced on a national basis. Havelock refers to these kinds of needs: such things, as, schools cannot do it alone; clients need help; colleges must be closer to their user systems; successful practices must be identified and surfaced from these environments; practices must be exchanged so that institutions themselves become this kind of exchange institutions; and finally, there is a great need for reducing the amount of reinventing going on within the schools today. I think Merrimack is taking these kinds of needs and goals as our tasks and moving towards improving our practices and trying to reduce and alleviate some of these needs. I think the way to do it is not to do it alone but basically do it in collaboration with other institutions. Although we will be spending a large part of the day trying to provide you some inputs as to these models of the SRF, the competency based education, the presentation by Dr. Ostar, we will hold most of the afternoon for your interaction and for you to discuss further the kinds of things that we talk about during the day. I think it is very important to say that in these sections this afternoon, they will be basically not just presentations but are being set up so that you can do the presenting and the people on the program will try to answer questions to the next steps.

I think it's important to talk just a little about the next steps. Here are the objectives. We are talking about an awareness type of conference today. But, I think we are talking about a little more than that. I think we have programs that we can share. Not MEC programs per se but programs that exist nationally that we can then hopefully share with you in your institutions. The afternoon session therefore will offer a choice of programs. You will be asked to select one of these programs at 2:30 to attend. Out of these sessions we would try to get some ideas from the people there as to whether you would like to go further in view of these programs. There are plans...there will be something in the January-February period of time as a result of today's conference. When we talk about IGE in some of our school systems we talk to teachers from the classrooms; we talk to them in a similar way as we talk to an awareness or overview conference. We ask them to participate and tell what areas they would like to move into and what kinds of commitments they would like to make. In today's presentation we are asking you to indicate your interest in these areas. We will communicate with each of you following today's conference and we invite your contact and communication back to us through the Merrimack Education Center.

I think then the program and objectives are clear. The sessions will delve deeper into these objectives and the next steps and we hope that you will have a very interesting and informative day. We thank you again for joining us.

CHAPTER III

SEARS-ROEBUCK FOUNDATION IGE TEACHER EDUCATION

University of Wisconsin, Madison Project

SEARS-ROEBUCK FOUNDATION IGE TEACHER EDUCATION

University of Wisconsin, Madison Project

Scope and Purpose.

Individually Guided Education (IGE), a comprehensive system of elementary schooling, is a product of educational research, development, and implementation initiated by Wisconsin Research and Development Center and cooperating agencies in 1965-66. IGE provides an alternative to the traditional age-graded, self-contained classroom. The organizational structure of this new system of education is the Multiunit School (MUS-E). At present out of some 80,000 elementary schools in the nation, there are about 1,200 MUS-E schools in some 30 states.

One major deterrent to more rapid growth in the number of IGE schools has been a lack of trained personnel to implement IGE in schools, particularly teachers, unit leaders, and building principals. Only a few teacher education institutions of California, Connecticut, Ohio Minnesota, and Wisconsin have developed IGE undergraduate and graduate teacher education programs with assistance of the Wisconsin R&D Center. Instruction for teachers at the preservice level and for unit leaders and principals at the graduate level is imperative to prepare individuals for the growing number of MUS-E schools. Many teacher education institutions are being requested to prepare teachers, unit leaders, and principals for MUS-E schools particularly in states where many elementary schools use the IGE system.

Objectives

In March of 1973, the Sears-Roebuck Foundation awarded a grant of $1.3 million to the University of Wisconsin to develop IGE teacher education materials over a three and one-half year period. These materials, through on-campus and related programs, will enable teacher education institutions to contribute to the entire process of starting, maintaining, and strengthening IGE/MUS-E schools.

The resultant SRF/UW IGE Teacher Education Project is designed to:

1. develop state networks made up of state education agency, a teacher education institution, a large school system, and a small school system. The networks will start IGE schools and establish the preservice and graduate programs.

2. describe possible strategies and programs that each agency within a state network may adopt or refine in identifying and carrying out its role and responsibilities.

3. develop instructional materials which explain IGE concepts and build the related skills the staff teachers need.

4. develop instructional materials which explain the major IGE concepts and build the related skills unit leaders and building principals need.

5. provide training opportunities for representatives of state network member agencies

6. provide complete information regarding the development and availability of UW/SRF teacher education materials

7. form a cooperative relationship with the R&D Center in working with state networks

Implementation Strategies

Enrolling and initiating new IGE schools is referred to as school implementation and getting teacher education materials into teacher education programs is referred to as materials implementation. The prime means of implementation is through respective state networks. During 1973-74, there are networks established in nine "old" states--states which already have a large number of IGE schools--and in five "new" states -- states in which IGE is not as firmly established.

The networks consist of a variety of educational agencies but each includes at least the state education agency, one or more teacher education institutions, a large school district, and a small school district. The SRF project provides financial assistance to networks to support the expenses of initiating and maintaining the network, training opportunities for network representatives, and information relative to the development and availability of the UW-SRF teacher education materials. It also is assisting in the organization and operation of the Association for Individually Guided Education.

School Implementation.

At least two agencies of each state network are developing the capability of starting IGE/MUS-E schools and are starting new schools and assisting in maintaining existing schools. The network plans and carries through an IGE/MUS-E maintenance and refinement program of short workshops for IGE personnel. The SRF project provides training opportunities for representatives of network agencies to develop competencies for leadership roles in school implementation.

Materials Development and Implementation

The SRF project is developing packages of IGE teacher education materials for preservice education and for graduate education of unit leaders and principals. Each package consists of a textbook, an instructor's manual, and some combination of 16 mm. films and slidefilms.

The package of teacher education materials are designed to develop understandings or competencies at three levels. At the first level, the packages present information about IGE concepts and practices. At the second level, combined use of the films/filmstrips and print materials develop comprehension of the main IGE concepts and principles. At the third level, competencies are acquired through study of the package materials and through participation in activities arranged by the instructor, including role playing, simulations, and field experiences.

In a two-phase sequence of planning and starting up, the state network agencies are respectively for preservice (undergraduate), unit leaders and principal (graduate) teacher education programs:

1. modifying an existing program so as to include the study of IGE concepts and practices

2. starting a new alternative IGE/MUS program.

Summary.

Building upon the experience of the past, the UW/SRF project has two major thrusts. First, urgently needed IGE materials and programs will be developed for teacher education institutions. Secondly, the implementation of these materials and of new MUS-E schools is to be carried out through state IGE networks. These networks are essential if IGE is to become a self-sustaining, self-renewing alternative system for elementary education.

State Networks

California
Colorado
Connecticut
Illinois
Indiana
New Jersey
Massachusetts
Minnesota
Ohio
South Carolina
Texas
Wisconsin

CHAPTER IV

NEW DIRECTIONS IN STATE COLLEGES

DR. ALLAN W. OSTAR
AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

Section 1

It gives me a great deal of pleasure to be with you and to take part in your conference "Developing New Partnerships in Teacher Education" and particularly to have an opportunity to hear Dr. Klausmeier describe the program at the University of Wisconsin. I spent the ten happiest years of my life at the University of Wisconsin. The Program that Dr. Klausmeier has developed is a very exciting one and one I want to learn more about. He is the man with the expertise. And, I am here to learn and try to share with you some of the things that the Association has done then also go beyond that and talk about some of the new directions for higher education and how teacher education fits into it. As I indicated the majority of the 308 institutions in our Association started off as normal schools, and many of them, in fact, were known as state teachers colleges until as recently as ten or fifteen years ago.

In 1967, the Association established a Committee on Urban programs whose charge was to attempt to wed the expertise and capabilities of state colleges and universities to the educational and other problems of the cities in which they were located.

Since the Association's member institutions produce more than half of the teachers for inner-city school systems it seemed natural that the committee should explore the possibilities for improving the education of teachers for inner-city schools.

The exploration began in 1968, with support from a grant provided by the Sears-Roebuck Foundation, the Committee sought to learn whether conducting teacher education programs in non-traditional settings--storefronts, community centers, local churches--would be feasible and productive.

After visiting numerous institutions in urban areas, a team of experts concluded that social geography was not a crucial determinant in the quality and effectiveness of urban teacher education.

What the team did recommend was that the Association and the Sears-Roebuck Foundation pursue their interest in urban teacher education by offering financial support to a group of institutions that were prepared to develop new and promising programs that emphasized the development of professional competencies in school settings. "The great need," the team's report said, "is to put ideas together into operational programs that can alter traditional education."

The Foundation agreed to fund a program whose goal would be to plan innovative programs for educating inner-city teachers, and in May of 1971 the Committee announced to our member institutions that funds were available to support "promising proposals to design competency-based urban teacher education programs utilizing the coordinated resources of colleges, public schools and communities."

As a result of that announcement five institutions were selected from the number that submitted[3] proposals.

(1) California State University of Los Angeles established for its prospective teachers an on-campus training facility which would include a simulation and games laboratory, a complete self-instructional programmed center, an inner-city video-tape models bank, and instructional and media materials produced by urban students and by students and graduate teachers. Using this "multiplex-media approach," the University hoped to develop urban teachers who would help children of diverse cultural and economic backgrounds (Fifty-three per cent of the Los Angeles urban student population comes from minority groups), to help these groups meet the same educational goals as the rest of the public school population.

(2) At Chicago State University they worked to prepare personnel "effectively trained to teach reading and communication skills," which the University regarded as necessities for learning in other areas. The proposal also emphasized the preparation of public school teachers and administrators with a strong sense of community mission. "If current trends in urban education are to be reversed," the University said in its proposal, "one of the first priorities must be for the public schools to develop a sense of relevance among their constituents." President Randolph was the Executive Vice President of Chicago State University before you were so fortunate to get him here in Massachusetts.

(3) The program at Rhode Island College planned to use the coordinated efforts of two other local colleges and their teacher education programs, educational and community agencies in Providence, and the State Department of Education. Trainees were to have more self-direction than that given in traditional programs, were to learn at their own rate, select the units they would study, and be trained early in self-evaluation. "A teacher education program must itself be a model of creative teaching, continual critical self-analysis, disciplined inquiry, and exploration and adoption of a program to individualize differences--both social and economic," the College said. Students who learn this way will teach their own students in the same manner."

(4) The University of Toledo plan was for a united effort, utilizing the talents and resources of the University, the local school agency, and the Toledo urban community. "To train teachers of high quality, sensitive to the unique educational problems of children living in urban communities, requires not only communicating the most advanced educational techniques, but also understanding urban communities," the University declared. "These communities possess needs, values and problems different from those commonly encountered in the United States." To achieve this goal, the University planned to work with existing community representatives in the Toledo metropolitan area and to give its students a minimum amount of time on campus and a maximum amount in the target Toledo schools and communities.

(5) Weber State College expected to build from the success of its award-winning WILKITS (Weber Individualized Learning Kits) and adapt these self-instructional materials to train teachers "for culturally different and the poor." The College's Institute of Ethnic Studies and School of Education planned to work together with local urban school districts and the Intermountain Indian School to develop a core of self-instructional urban teaching materials. The planning program designed a method of recruiting prospective urban teachers and of giving them positive attitudes and positive techniques for urban teaching, thus turning around an educational system which "had long been directed toward the education of the middle-class majority, and, in so doing, all but ignored the unique needs of the urban, the semi-urban and the culturally different student."

As a result of this unusual grant program, the Sears Roebuck Foundation decided to concentrate on improving education through improvement in teacher education.

I think you can see a pattern in each one of the five institutions the involvement of the community in the cooperative kind of effort that we see here in the Merrimack Center and in your presence here. This demonstrates a commitment to the validity of this approach.

As a result of this relatively small pioneer effort, Sears Roebuck decided to concentrate its resources and gave the first grant, I think it was 1.4 million dollars to the University of Wisconsin for the program that Professor Klausmeier has been heading up.

We were delighted as an Association that in this one area we were able to simulate the Sears Roebuck interest in this and out of this now is coming the activity that you're engaged in. Having once worked for a Foundation, I sense the frustration that many have in giving grants for various kinds of research projects always to see those projects end up in monographs and gather dust on shelves without an action component built into it. One of the requirements that we tried to build in was an action component, a dissemination component, an implementation component, and it is this implementation component now that is perhaps the most important component.

Despite the development of many new programs, I have tried to demonstrate that the state colleges still have a strong commitment to providing society with professional teachers. However, in the years between the normal schools and the state colleges, several things did happen to our society.

Following the demand for professional people--engineers, teachers, industrial and agriculture specialists--to fuel the country's material development and growth, there came an emphasis on personal growth. Society came to demand not just professional training, but education which would result in a well-rounded individual: a well-socialized, tolerant, contributing citizen. Thus, general education became married to the professional curriculum. In time, of course, general education absorbed more and more of an institution's resources as more and more students elected to go into fields other than teacher education. State colleges and universities moved from single-purpose teacher colleges to more comprehensive institutions.

I'd like to discuss this change in mission with you for the balance of my time. I think it extended beyond the state colleges to many of the institutions represented in this room. Within this change in mission there occurred a change in access to the institutions. From a constituency of a small percentage of the college-age population, approximately five per cent of the 18 to 21-year old population in 1910, institutions gradually made room for greater and greater numbers until at the end of World War II, the concept of mass education firmly took hold with the G.I. Bill. The concept was simply that anyone who met the established standards of a college was entitled to the opportunity to attend. It was a very important landmark in the history of higher education.

Since the time of the G.I. Bill we have moved to an even more expansive concept, one which should have a far-reaching impact upon our present form of higher education. That is the concept of universal education. Universal education goes beyond mass education in that it is accessible to all segments of the population, not just those who can meet a standard college entrance criterion. In fact, under the concept of universal education, standard criteria need not apply. Rather degree requirements and assumptions of learned competencies tailored to fit each individual's needs, goals, and level of learning are becoming more important.

I would like to refer back to my mention of generalist education to discuss one other very important change which has occurred in our society. And that is the seeming level of liberal arts saturation that society has apparently reached. Our present labor market has absorbed as many college graduates as it can, and we still have surpluses. Surpluses of very capable men and women who, although they may be working, are not working at a chosen profession and perhaps not even working in a position which requires any post-secondary education. Most of the surplus graduates are in the liberal arts fields, such as English, history, and political science. I have, in other forums, discussed the fact that this is not an era of teacher surplus, but rather a time when we can raise the quality of teaching in our schools by using this vast reservoir of talent to lower class ratios toward an acceptable level, and by providing individualized tutoring in the cases where it is so badly needed. Unfortunately, governments, neither state nor federal, nor school boards, nor taxpayers have taken the necessary initiatives to promote the quality increments, and it seems therefore rather futile for me to discuss the realities of the teaching situation.

At the same time that too many graduates were applying for not enough jobs, some jobs remained uncomfortably vacant. These were the specialist jobs. Jobs in engineering, in allied health, in environmental fields, and in commercial and industrial fields. The colleges, said many, are providing us with too many generalists and not enough professional specialists. And, in some cases, the people were right.

The old normal schools are now faced with at least three very challenging demands by society. One, they must adjust to the concept of universal access. Two, they must build flexibility into their curriculum planning to produce the needed specialists. Three, they must develop new linkages with their communities. They ave tended to ignore this last part in this great growth period they have enjoyed. But now we are seeing a recogn tion that the development of these linkages with their r gions with their constituencies are becoming very rucial not only for the survival of the institutions b t to the enhancement of the quality of the programs of those institutions. Again, I think that a look at your pr gram today and the emphasis here on linkages with communit es in the development of your programs to me is one of he most hopeful signs and may indeed hold the key to surviva for many colleges in this country.

We are all familiar with he general characteristics of the post-industrial revolut on that we live in. If we had to choose one word as the enor of our society, we would probably pick the word "hange." Change, both technological and social, whic occurs at an ever increasing rate. The obvious consequence of this change are rapid technological advances which m de obsolete both machines and men; and a proliferation o knowledge which no library can possibly contain.

The graduate who enters t is world must be prepared to cope with a lifetime of change and in many cases, he is not prepared. He is not prepared ecause our colleges and universities in many cases are not p epared. For the most part they are still thinking in terms of the four-year baccalaureate degree, either as a terminal d gree or as preparation for graduate school. They still c nceptualize the 18-year old student who completes a series of required courses and emerges four years later, diploma in h nd, never to be seen again.

I say, "for the most part" because there are some institutions which are embracing the oncept of open-ended education. Minnesota Metropolitan State C llege is a brand new institution without a campus devoted olely to furnishing continuing education for the urban popula ion; the community is the campus. Appalachian State Uni ersity in North Carolina has opened its seventh academic sc ool, the College of Continuing Education, which is designed t take the university to the adults in the region which nee its help. Old Dominion University in Virginia is offe ing an expanded extension program which makes no distinc ion in either quality or credit between courses offered on and off the campus. Grand Valley State College in Michigan offe s a new program in adult education entitled ACCESS. A numbe of institutions are offering graduate programs where the st dent never steps foot on the campus. Residency, as a conce t, appears to be losing significance. These programs involve external degree programs, televised courses, regular class work and correspondence study. Any method which is more able to reach the adult population which needs to continue its education, but which cannot afford the disruption of returning to the campus for several years.

Buckminster Fuller, an American architect, philosopher, engineer and sage, has said that man is not a noun, he is a verb. He is not an object, but a process. This is what education must be: a process, from which students can exist and enter as their needs dictate, and as the changing technological society compels them to do.

Sir Richard Livingston, former head of Oxford College, 30 years ago compared the education of a new university graduate to a newly purchased automobile; "If he uses it for years without periodic overhauls, it will cease to be a useful means of transport, and probably become a danger to the public."

Naturally, if people are going to drop in and out of college all through their lives, this must lead to a shift in our definition of who and what a student is. In 1969, a full 40 per cent of men, and 17.5 per cent of the women, between the ages of 22 and 34 were attending day or night school on either a part- or full-time basis. We can safely assume, I think, that this percentage will increase steadily throughout the decade. We can no longer consider our students as shiny-faced 18-19- and 20-year olds. We must now realize that many of the classrooms and libraries will be filled with students in their 30's and 40's and even 50's and 60's.

Our colleges in the 70's and 80's will need to be more than holding ponds for youngsters fresh out of high school.

And as we expand our concept of a student, we must also expand our admissions rules and relax our withdrawal procedures. I don't think you can admit a 40-year old exclusively on the basis of his high school grades or his ACT or SAT scores, or even his old college grades. Technological obsolescence and motivation for self-improvement are strong credentials for admittance. Additionally, as mobility is a pecularity of American society we must be more willing to transfer credits from institution to institution, from state to state, and even from year to year. We must also recognize that many of these adults, and even our younger students, are knowledgeable in certain fields before they get to class. This problem of mobility and transferability of credits is something to really work in as a challenge.

We at AASCU have tried to deal with this problem in a little different way. We started off by developing what we call the Serviceman's Opportunity College because the military is trying to build into their volunteer concept an educational component to make the volunteer military more attractive, by providing educational opportunities for the men and women who enter the military force. They have found that while a great many colleges are offering courses on bases that as military personnel move from base to base they can't transfer these credits. They can't meet residency requirements; and so it is very difficult for them to accomplish either a two-year associate degree or a four-year degree much less a graduate degree. As a result there have been powerful forces in the military to try to establish educational institutions run by the military for military personnel. We at our association have accepted this as a challenge and we have said that we will commit ourselves to working not only with state colleges but with private colleges, universities and others to demonstrate that civilian higher education in this country can respond to the national educational need and can adjust these programs and its requirements to meet the peculiar needs of a mobile military group. Indeed we now have signed up over a hundred colleges and universities that have agreed to accept each other's credits. We're almost setting up a common market in the field of higher education so military personnel can move towards an educational objective.

The idea that all learning does not originate in books formerly was accepted as truth by self-made men and college drop-outs. However, many educators now realize that work experience and volunteer work outside the classroom is invaluable learning. This has led to a growing number of academic programs with internships on the job for credit. In many new innovative programs, students receive academic credit for prior employment or volunteer experiences. Our credit requirements must take these outside the classroom experiences into consideration.

This same flexibility should be extended to withdrawal procedures. As education becomes more and more a life-long process, instead of a final initiation rite into adulthood, many of the students in the 18-21 year old category may not wish to take their education in a continuous four-year segment. Instead they may wish to relate their educational needs more closely to their career progress by stopping into college for a year or two then stopping out to work. California State University, makes a provision for these students.

in their stop-out program, which provides for an automatic return after a one-year absence without re-admission forms and fees. This exiting and entering must be a very fluid thing. Students must not be made to hurdle the red tape of admission requirements and untransferable credits and the stigma of having a red "withdrawal" stamped across their records as a negative factor.

Flexibility is the key word for the colleges of the 70's. Flexibility in rules and regulations; flexibility in instructional methods, and flexibility in attitude. By attitude I mean the belief that colleges were created for the 18 to 21-year olds who live on campus, and that the older students who come to learn at night and during the weekends are not quite as bright, or as serious, or as deserving of our best faculty and our best equipment.

They are as bright; they are as serious, and they are as deserving of everything that the college feels duty-bound to give to the so-called regular students. One of the sins of higher education has been the separation of continuing education from the rest of the academic structure: Separate buildings, separate faculty and separate funds. In many cases the continuing education programs are forced to be self-supporting -- a burden which is not placed on the rest of the academic programs. Continuing education has been the step-child of higher education, felt to be substandard to the regular curriculum. And in many cases it is -- not through any fault of its own, but because the college maintained it at that level.

We must develop the conviction that continuing education should be an integral part of the academic flow which leads to a degree with no distinction made to as whether that degree was earned during the day or during the night on campus or off. The colleges of the 70's and 80's must offer high quality education to all students on the most convenient terms possible.

Increasingly in the 70's we will be moving away from the notion that every child should go to college and toward the belief that every person should have, throughout his life time, the opportunity to receive the kind of learning experience he wants and is ready to pursue. If higher education is too slow to respond to this change in focus, it will likely lose its favored role in our society.

There are already a wide variety of post-secondary institutions other than colleges that are prepared to meet the burgeoning need for this change in focus; business and industry, such as GM institute, IBM, University Labor Unions, Government and Henry Lundeberg School of Seamanship. And now, of course, the proprietary institutions. These are springing up all over the country -- at the last count there were 10,000 with 1 1/2 million students enrolled. In the Higher Education Act, Congress has now formally designated all of these institutions as post-secondary making available to their students, all forms of federal financing, which, up until now, was limited primarily to students only attending accredited non-profit colleges and universities. This financing has also been extended to part-time students. This year proprietary schools experienced an increase of 28% in their enrollments. There are opportunities here for linkages. There is a very basic change we can make now in our teaching-learning process which may level out the ups and downs of change in a graduate's lifetime. We would all agree, I think, that one basic purpose of education is to teach students how to think, not what to think. But how do we translate that objective into the curriculum.

A learning experience, which can be structured in several different ways, is practiced at the Evergree State College in the state of Washington through thematic study programs rather than lock-step courses. Students apply the skills and techniques from several disciplines to the central theme or problem of the study program. Instead of separate courses in the social sciences, biology and philosophy, there exists a year-long program in Human Development. In the place of unrelated courses in archaelology, phychology and sociology, there is a study program entitled "The Individual in America." The degree to which colleges instill within students the knowledge of how to learn, how to think, is a measure of how well they have prepared the students for American society.

Here I think we also should take a brief look at the needs of this American society. That catalogue of social wants has an immediate and qualitative impact on your success at preparing graduates.

Societal needs correspond on a one-to-one basis with the number and types of jobs available. A survey of the employment market is one indication of whether society's needs are being satisfied, surpassed, or ignored. According to the Bureau of Labor Statistics, there is a growing demand for people in the fields of health, engineering, city planning, social sciences, science, architecture, business and commerce.

Now, what about the supply? Just how well is higher education fulfilling society's needs? In the latter four categories--we have responded by preparing an adequate number of graduates for the demand. However, in the first three categories where very real needs exist, we have not prepared enough graduates.

Our society is developing new needs with every change. Some so new that no statistics exist, such as consumer protection specialist, environmental protection specialist, and drug rehabilitation counselor. Higher education must correlate programs and graduates to the evolving needs of society. In the past, higher education has fulfilled some of these needs. The colleges of the 70's must serve all of the needs. We can no longer continue, no matter how unconsciously, in the development of self-serving educational and research programs. We must prepare graduates who are needed by society.

This obviously means new and reorganized academic programs. And I do not mean traditional programs with a new name and facelift. Harold Goldstein, Assistant Commissioner in the Department of Labor, stated at the New Careers conference that by 1980, employment in the professional and technical fields will increase by 50 per cent. And only 20 per cent of the jobs in 1980 will require a four-year college degree. The implications of the statistics are obvious: many of the new programs needed to close the gap between higher education and society are career, or vocational oriented, with an increase in associate degrees.

If what society needs is more medical technicians, more computer programmers, more public health officers, more library technicians, and more law enforcement officers, the college of the 70's can not be so sacrosanct as to sacrifice society's needs for the continuance of the established traditional education. Along with our classics, our humanities, our liberal arts, we must make room for the career programs that society needs. Far from being mutually exclusive programs, every career program student should be versed in basic humanities.

As an adjunct to the new programs, we must hone and polish our counseling services to the highest degree of professionalism possible. The counseling departments, appearing as a non-instructional area on the budget, all too often limp along on a skeleton staff, a victim of malnutrition. When this occurs, counseling is done frequently on a part-time basis, by faculty members who may or may not be working in the area of their expertise; and by upper division or graduate students.

In order to prepare students to take their places as productive, happy -- not to mention gainfully employed -- citizens in society, they must receive the guidance of professionals. They must be counseled by full-time personnel who make a practice of studying the charts and the graphs of employment trends, and who can test and evaluate the capabilities of students. It is not enough to just offer new programs. We must be able to re-direct students to fields where their interests and skills are saleable. It may do more harm than good to produce a mediocre social scientist who would have made a great aviation traffic manager -- if only we could have counseled him properly.

I don't mean to suggest that this sole function of a college or university is to supply society with trained manpower to keep the business of society running. Colleges and universities obviously must function to foster personal growth in the student: the self-discovery of creativity, of social awareness, of sensitivity to the balance which must be maintained between the fulfillment of internal goals and society's external goals. The development of appreciation for the arts and humanities, and the broadening of social tolerance are two characteristics which every graduate must possess is he is to be truly educated.

Career programs must be structured to prepare well-rounded students. They must be balanced and the four-year colleges and universities are the institutions to provide this balance. They are institutions which can synthesize the career programs with the general liberal arts academic programs. Without the influence of the general liberal arts education, we fall into the trap of the production line: turning out narrowly defined workers to be fit into a slot in the economy.

I commend the Merrimack Education Center and the schools represented here for the commitment you have made to revitalizing the teaching curriculum. You have taken the worst of times for teacher education and made it into an exciting time of reform and experimentation. I would hope that the same enthusiasm which you have generated for individualized instruction and competency-based teaching will spill over into other innovations in other curriculums. We will be watching your progress with a great deal of interest. I hope I can report to other places I may go that Massachusetts has taken a lead in developing this series of objectives.

CHAPTER IV

INDIVIDUALLY GUIDED EDUCATION

DR. LESLIE C. BERNAL
MERRIMACK EDUCATION CENTER

Section 2

It's my role this morning to talk to you a little bit about the IGE program, and to explain it to you. When I approach that task I think that well, let me back up just a little and tell you that the IGE program has been evolving and developing over the last 17 years. And I've been asked in about 10 minutes to give you an overview of IGE. In addition to that, I follow Dr. Ostar and precede Dr. Klausmeier and thirdly I was handed a note saying to cut my remarks to five minutes. So, I like challenges, but this is ridiculous. But nevertheless, with your indulgence and refocusing your attention for five or ten minutes on the elementary school, I will attempt to do just that. IGE, Individually Guided Education, is a program designed to assist the classroom teacher, the unit teacher in individualizing instruction. It's a systematic approach to individualization. It has seven components that I will briefly review for you: (1) organization for instruction; (2) an instructional programming model; (3) curriculum materials; (4) measurement tools in evaluation; (5) a home-school communication component; (6) a facilitating environment and, (7) research development to continually improve the system.

In the organization for instruction, the unit has several components as you can see from the prototypic chart (see figure 1). Inherent in this are team teaching, nongradedness, accountability, open communication. Each unit has a unit leader, three or four teachers, and paraprofessional assistants in the clerical and instructional areas as well as interns from colleges, student-teachers from colleges and universities. You will notice that the youngsters are grouped into this unit on a multi-age basis - the chronological span of at least three years and oftentimes four. It's non-graded, a continuous progress program within the unit setting. You'll notice at the second level, in red, is what's called the Instructional Improvement Committee. This committee is composed of the unit leaders and the principal.

Now the IIC has as its primary function the decision-making that involves two or more units, those decisions that affect use of time and space and materials for the building and has the responsibility for setting the educational objectives and programs for the school as a whole. It is a participative decision-making group. The principal in this group has as his responsibility the organization and chairing of this group. That's the role of the IIC. The only new role

IGE SYSTEM COMPONENTS

- HOME SCHOOL COMMUNICATIONS
- DECISION MAKING
- LEAGUE ACTIVITIES
- LEARNER PROGRAMS

that we're really talking about in the IGE organization. The unit leader is a master teacher or career teacher, call it what you will. But, he or she is a teacher, not an administrator. And the unit leader's responsibility is to see that the planning and the implementation of the instructional program takes place.

The second component of the IGE program is the instructional programming model. I'll briefly review through the steps that an IGE school would go through. First of all, educational goals or objectives would be set for the school. From this general group of objectives, specific objectives would then be identified for units or levels of instruction within that school. That's step two. The responsibility now would move to the unit - once the objectives have been identified and assigned to the unit, then the unit would have the responsibility for assessing mastery of those specific objectives for the unit, with the group of youngsters in that unit. Step four - specific objectives would now be set for individuals and the unit teachers would sit together and plan together in designing and implementing a program of instruction to meet those objectives. Here's where your third and fourth components of IGE come in to play - curriculum materials, measurement tools and evaluation. Once the program has been designed and implemented, the unit teachers assessed in the attainment of these objectives depending upon your success, you'll find the youngsters in new learning experiences revolving around the same objectives or going on to new objectives.

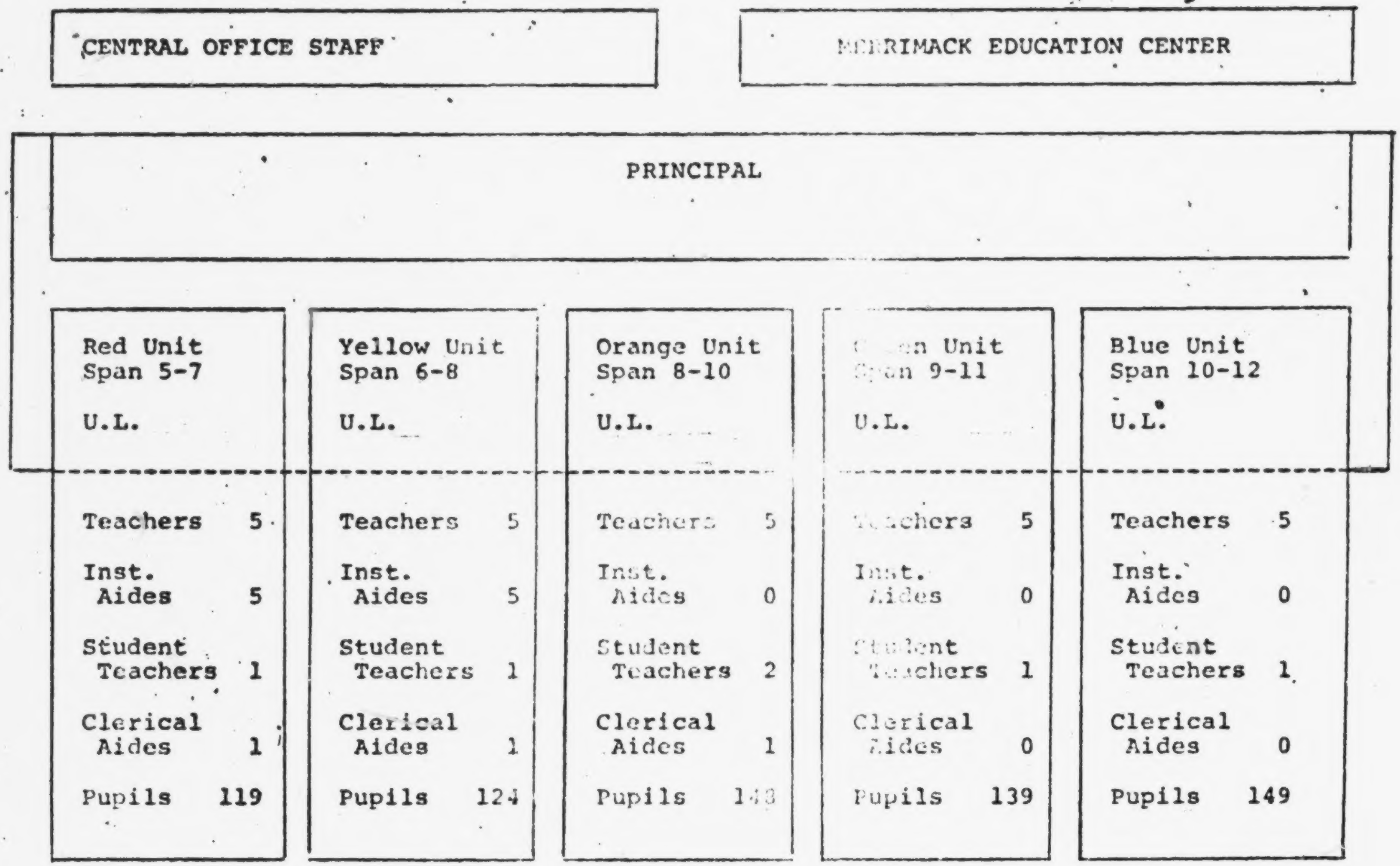
The 5th component of the program is the home-school communication center. This has two very basic objectives and one is to involve parents and lay people in the school program. Certainly, in IGE schools that I'm familiar with, there is a realization that the teacher cannot individualize instruction alone. There's a realization that the teacher is not the only teaching model for children. So there's a real concerted effort to bring parents into the program and utilize their strength in instructional learning programs. The second objective of this component is to gain the support, the wide support of the community for what the school is trying to do.

The sixth component of the program is the facilitating environment, creating facilitating environments. One of the things that we've been able to do in Massachusetts, New Hampshire and other areas, is to take leagues of elementary schools that cross school system boundaries. We joined school faculties together that have a common commitment to individualizing instruction. They share instruction, they identify problems together and they plan activities to meet these problems. This is where the facilitating agency such as Project SPOKE in Norton, Project SHARE in N.H., MEC in Chelmsford, FSC in Fitchburg - these types of facilitating agencies work with the schools in providing workshops, information releases, research support, evaluation and monitoring, these type of things with teachers who are working towards implementation of the IGE program. Another facilitating environment that's being developed certainly at the early stages in Massachusetts is a network of agencies, institutions who are working towards individualizing instruction - the local education agency, the state, the facilitating agencies such as the I've mentioned, colleges and universities. We hope to form such a network and I feel confident that we will form such a network within the next two months. Nationally, this network would be linked with 13 other states who are also forming networks, developing a clearinghouse for information - holding annual, semi-annual workshops for teachers and unit leaders, this type of thing. So, these environments are being developed locally, regionally, state-wide, nationally.

The last component that I wanted to mention to you is the Research & Development. The I/D/A Kettering Foundation has been doing an awful lot of work, good work, I think in teacher training at the in-service level and they've developed packages of materials that teachers in the field can use and this is an on-going program that the Kettering people have. The University of Wisconsin developed curriculum programs in reading, mathematics, and science. They've developed programs in motivation; they're working on such topics as learning styles, home-school communication, on-going Research & Development in these areas to continually improve the system. You might look at this whole network as something like (Figure 2) where the local unit in the school is linked with the other units in the school by the IIC, or the Instructional Improvement Committee which in turn is linked with other schools who are trying to individualize instruction to the IGE program. That league of schools is then linked with other leagues and that state is then linked with other states. At the present time, there are over 2,000 elementary schools in the U.S. that are now working in the IGE program, some as long as 17 years, some as recently as last September, more planning to start in September 1974. It's growing very rapidly, no doubt the most rapidly growing program of its type in the U.S. It's also in many international locations. In Massachusetts there are about 40 schools at the present time that are implementing or planning to implement IGE and we have included those schools on the back of your program for your information. In addition to that, we have two schools in Massachusetts that are beginning to implement the middle school IGE program - a very exciting program, a very chellenging program. There are two schools that

ORGANIZATION

679 Pupils



CENTRAL OFFICE STAFF

MERRIMACK EDUCATION CENTER

PRINCIPAL

Red Unit Span 5-7	Yellow Unit Span 6-8	Orange Unit Span 8-10	Green Unit Span 9-11	Blue Unit Span 10-12
U.L.	U.L.	U.L.	U.L.	U.L.
Teachers 5	Teachers 5	Teachers 5	Teachers 5	Teachers 5
Inst. Aides 5	Inst. Aides 5	Inst. Aides 0	Inst. Aides 0	Inst. Aides 0
Student Teachers 1	Student Teachers 1	Student Teachers 2	Student Teachers 1	Student Teachers 1
Clerical Aides 1	Clerical Aides 1	Clerical Aides 1	Clerical Aides 0	Clerical Aides 0
Pupils 119	Pupils 124	Pupils 148	Pupils 139	Pupils 149

are now doing this - one in Woburn, the John Kennedy School, the principal is here with us today, Bill Harrigan, and if you're interested in that program, why don't you talk to Bill. The other school in Massachusetts is the McKay School in Fitchburg on the campus. We have the facilitator of that program in our center, Dr. Pilecki. He'll be available this afternoon for your questions. The middle school is being moved on into several states and, in addition, there's a high school program being field tested in several states in September of 1974. In addition to those efforts, you've heard mentioned several times, the SearsRoebuck Foundation. And I'd like to move into that now and introduce to you our next speaker.

CHAPTER IV

Section 3

SEARS-ROEBUCK FOUNDATION PROGRAM FOR COLLEGES AND I.G.E.

DR. HERBERT J. KLAUSMEIER
Director, SRF Project
The University of Wisconsin

Dr. Klausmeier

I'm very happy to be here with you this morning. I'm always humble and grateful to have an opportunity to travel to various places in the United States and to share with you a few ideas. I thought that it might be helpful this morning if I could raise a few questions about the Sears Roebuck Foundation Project. I shall answer them, too, so that makes the questions and answers very easy for me.

WHY IS THERE A SRF IGE TEACHER EDUCATION PROJECT?

Out of some 80,000 elementary schools in 50 states of the nation there are about 2,000 IGE schools as Les has indicated. Some of these schools are highly effective. They are offering a very high quality of education; they are alternative schools. At no point was the IGE school conceived as the only kind of schooling; it was conceived as an alternative to age graded classrooms and also to departmentalized instruction.

WHY AREN'T THERE MORE IGE SCHOOLS AND WHY AREN'T CERTAIN OF THE IGE SCHOOLS OF HIGHER QUALITY?

I understand all of those in Massachusetts are of the highest quality. The reason is quite simple; there are not the trained educational personnel, teachers, unit leaders, building principals to work in these schools. There would probably be more pre-service teacher education institutions involved in preparing pre-service teachers and in-service graduate programs for elementary teachers and school administrators if colleges had appropriate materials. The SRF/IGE Teacher Education Project is dedicated to developing these exemplary teacher education materials over the next three years.

WHAT ARE THE MAIN OBJECTIVES OF THE TEACHER EDUCATION PROJECT?

As has been indicated, the first objective is to assist personnel of various states to develop networks of agencies that will include one or more representatives of the state education agency, one or more representatives of teacher education institutions and representatives of local school districts. It is hopeful that over the next 2 to 5 years within these states, that among these various agencies they will have the available capability to help local schools first make the changeover as they may care to do so from the more traditional form of schooling to the IGE alternative form of schooling. It is very clear, as Les has implied, that schools can make the changeover, but they need assistance. They need assistance at least over a couple of years. Assistance of persons from state education agencies, teachers education institutions, and regional education agencies, who can help them solve their educational problems. They don't have any more educational problems than do the traditional schools. However, part of the IGE concept is that we must continually change and improve in order to serve the needs of the children and of our society. It is hopeful further, that within each state there will be a capability for offering short intensive workshops for staff of the various IGE schools once they get started. Hopefully, also when there are 40 or 50 or 100 IGE schools within any given state, it would seem that at least one teacher education institution within that state would develop or incorporate IGE practices into their pre-service program so that some school districs that wish to hire teachers who know IGE could hire such teachers so that they don't immediately have to start an IGE in-service program for the teachers whom they may hire. It is hoped also that over the next 2 to 5 years within each state there will be one or more teacher education institution which offers graduate programs for elementary and middle school teachers. They will also within the graduate programs acquaint teachers with IGE and specifically prepare IGE unit leaders. There is no doubt that many school districts wishing to make the changeover would make the changeover more quickly if they had available IGE unit leaders. Similarly, it is hoped that within each state in a teacher education institution there would be one that would offer graduate programs for school administrators that would prepare school administrators, particularly building principals, but also personnel within central office who are familiar with IGE. We are using a small portion of the SRF money to work with 14 states to help form such networks. We are happy to be able to work with you here in Massachusetts through the Merrimack Education Center. Another objective is to assist as we can a little directly working with the Wisconsin R&D Center in setting up workshops for teacher education personnel leadership personnel from state education agencies and regional education agencies workshops of about one week in length so that in which leaders from these various agencies can become familiar with the whole gamut of IGE from the program at the elementary level through the teacher education level. We will work with MEC in that regard as it pertains to the state of Massachusetts.

WHAT IS THE NATURE AND STATUS OF THE TEACHER EDUCATION MATERIALS THAT ARE UNDER DEVELOPMENT?

A task force of about 35 people representing SEA's. teacher education institutions and school districts met over a period of 4 months to identify and formulate the specifications for these teacher education materials. In other words, trying to describe what kind of teacher education materials would be most useful for the pre-service and graduate programs. The final configuration is nine packages of teacher education materials. Each package has a testbook, an instructor's manual, and some combination of 16 mm film and filmstrips. We've tried to develop some kinds of materials that will have maximum flexibility, that will not require a particular new kind of equipment or technology whatever, so that they can be used in the largest variety of teacher education institutions that are interested. We hope that each one of these will describe an exemplary program and that the college professor can use these materials to acquaint the student with one kind of exemplary, alternative form of education. These packages of materials are being developed with contracts of with authors, for textbooks and instructor's manuals and through contracts with film producers to produce the audio and visual materials. Similarly, anything we are doing in the 14 states we are doing through sub-contracts with persons in those states. In the case of Massachusetts we have an agreement with the Merrimack Education Center. I might tell you that there's only a very small amount of money involved in this; a large amount of money obviously has to go to developing films and filmstrips and also to get the books prepared.

Each one of the packages, if produced as presently anticipated will try to do three things: first of all, the materials. . . certain of the materials are designed specifically to give accurate information about IGE so that the film, for example, IGE READING INSTRUCTION, can quickly give information about what IGE reading instruction really is. The textbooks that accompany it will be studied more intensively. The manual that accompanies it may have exercises that the professor may use in assessing knowledge that has been gained from the text and the films. It also will have suggestions as to how to build specific competencies. We are hoping then that each package of materials can be used first, to give information, to motivate; second, to make sure individuals comprehend the major concepts; and if a college wishes to go in the direction of teacher competencies or competency-based teacher education, it may do so. We feel that certain institutions that are preparing personnel primarily for IGE schools are going to be able to use these materials. It's going to provide a substantial amount of material in that school. Other schools may not choose to use it at all; particularly if they're not going into a competency-based program.

There are seven packages for pre-service; one graduate for teachers and another graduate level for building principals and school administrators. After a nine month planning grant, our development grant got underway August 1st of this year and runs to July 31st three years hence. The first package which will be Individually Guided Reading will be available as early as January of 1975 and is seen as being definitely available for the 1975-76 academic year. Most of the other packages will be available for the 76-77 year and the last one or two for the 77-78 academic year. In general, it takes about a year to develop the materials; it takes the publisher about six months to prepare them; and the publisher who is Addison Wesley of Reading, Massachusetts needs about six months from the time the materials are ready in early spring, say March, to get the information about so that they may be ready for use in the fall classes. Another question. . .

WHAT'S GOING TO HAPPEN TO THE INCOME THAT MAY ACCRUE FOR THE SALE OF THESE ACADEMIC MATERIALS?

No author of any book or manual, no film producer will receive any royalties. The SRF is not going to get any money back. They don't want it by the way; we're happy about that. Instead, any royalties that may accrue are assigned to the University of Wisconsin School of Education for the specific purpose of supporting graduate or post-graduate research and development related to IGE. I hope that some of you, at some time in the future, if there is royalty and I assume there is going to be, will be able to participate in some of those short term institutes which may be supported by this kind of a program. Another. . .

WHAT IS THE RELATIONSHIP OF THE IGE TEACHER EDUCATION PROJECT WITH THE SRF?

The SRF has submitted the 1.4 million to us. It covers the period as I've indicated through August 1, 1976.

The agreement with the SRF essentially is a performance contract. Our activities are reviewed annually. We are assured of this continued funding through 1976 so long as work is accomplished according to schedule. And, our work schedule is very tight. Among other things we have tried to sign agreements with fourteen state education agencies in the first six months and we have done so. We have also indicated that we would have the first package of materials available to the publisher by August 1st of this year. We think we're going to meet that. We will have five or six other packages ready by the next August in the next year. And, I think that we will meet that. So I'm quite sure that we have a performance contract that is the type, barring unforeseen events, we will be able to meet.

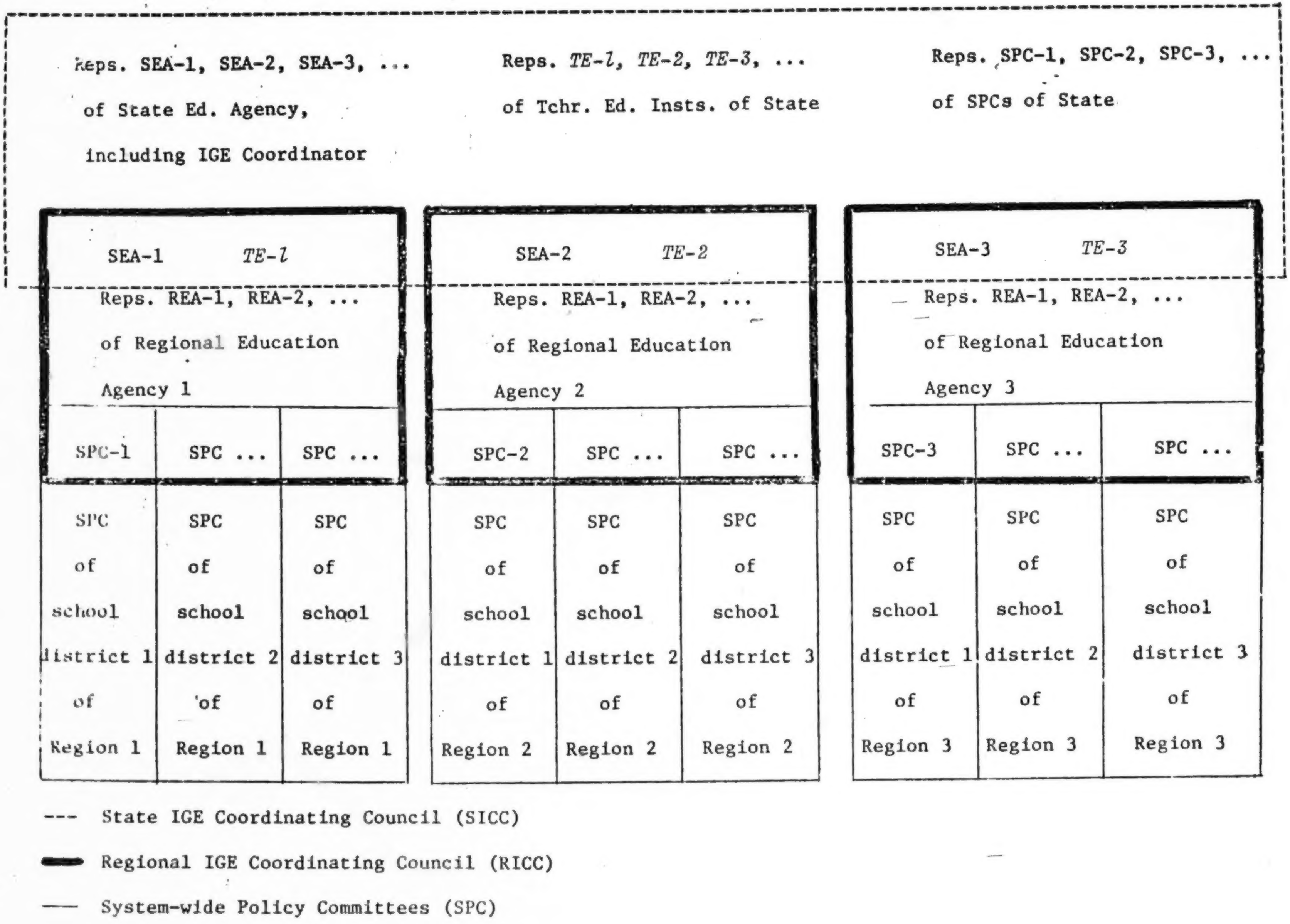
WHAT IS THE RELATIONSHIP WITH THE WISCONSIN R & D CENTER?

I'd like to point out that we have our own bases in Wisconsin. The Wisconsin R & D Center is a federally funded R & D Center. The monies that go to the Federal government and then tc the R & D Center come from all of the states in the United States. You're aware that the Sears Roebuck Company has a store here and they're in almost all of the states of the United States too. So while we are based in Wisconsin at the University, we regard ourselves as a group of individuals who fortunately have received some funding to help improve education across the nation. We try everything we can to make sure that the IGE program in Massacuusetts is the Massachusetts IGE program. The R & D Center is funded to develop IGE instructional materials, curriculum and organizational patterns, the home-school communications program, and the like to through at least December, 1965 at the rate of about 2 million dollars per year. So one can be quite confident again barring some unforeseen events that the R & D Center is going to continue to develop and bring out the curriculum instructional materials which are presently under development. And those materials are programs in reading, another in pre-reading, another in mathematics, another in motivation, one beginning in environmental education and, as has been indicated, also working toward model programs at the secondary school level. As I've indicated, the SRF Project is devoted solely to teacher education materials and related implementation. So there is a complete complementarity of effort between the Center and the SRF. We're independent of one another fiscally and also administratively. We try to avoid getting federal monies into any kind of development like this because the amount of red tape that's involved in doing things just takes many many months and years to get accomplished. This way, working with SRF, permits us to work with publishers, states, authors in a very open way and with a minimum approval or delay.

Les mentioned an association for IGE which is a national organization. I might indicate that the SRF Project enthusiastically supports that national association; we support it as an autonomous body and its people like Les Bernal, some of the educational leaders from some of the other ten - twelve states who have gotten together and have worked very hard over a period of months to make this organization a reality. And I should say that there is a great need for this kind of an organization since this organization will have in its representative groups teacher educators, persons from state education agencies, teachers and school administrators. It's probably one of the very few organizations in the States that brings together simultaneously persons with the same interests - from state education agencies, teacher education agencies, school administrators and teachers. I think one of our problems is that as we become specialized we tend to organize ourselves into separate groups and we are not communicating with the various groups that we need to communicate most with - if we really take most seriously the idea that the time has come when we can do a better job of quality education and we need to put our educational and intellectual resources together to do this. The SRF Project is happy to have membership in the association. As you can see from one of the handouts in your packet, the staff is small. We have a very small project staff; there is a little handout in one of your conference papers that indicates what our staff of six is and most of us are not full-time on this project. I am a professor - I teach an educational psychology course at least once a year for prospective teachers. I also teach a graduate course in human conceptual learning and development. I am heavily involved in a longitudinal intervention study in which we're trying to put together knowledge that we've been developing over the past ten years to see if we can't facilitate children's learning of concepts in the major subject areas of math, science, social studies and English.

That project is underway and will go for at least another five years. I think we have knowledge about teaching that eventually we can put into a form that will tend to make, as Les has said, with the continuing research and development, a possiblity for greater improvement in the quality of education. I would like to invite your attention to one of the other handouts which is in your packet and let me say this. We're right at the beginning of the three year period in the development of the materials but we're right in the heart of trying to work with people in the fourteen states to assist the leadership in that state as we may in forming some sort of network which in turn can address itself to some of the problems of teacher education within that state. There is a handout that is entitled "The Nature of the SRF IGE Teacher Education Project". There is a little information about the project on the front page; it's stated a little more succinctly than I stated it to you. Our address is also there. It is given at the bottom. In the handout I would like, if you will, to consider with me the last page - an organization chart for the Association for Individually Guided Eduatiion. Les indicated earlier what the Multi-Unit School Organization is. I want to point out one or two principles of that organization that are represented here. At the bottom, you see a division of state IGE networks and you see fourteen states (Figure 1). Those are the fourteen states with which the SRF has an agreement and this agreement we have with each state goes through three years to July, 1976. Each of those states was given a very tiny amount of money for people getting together at meetings such as this. . . no more. Now there is a division of educational research & development and also a division of SRF members. Exactly what happens to those divisions I don't know but for our purposes this morning, I would like to take a look at the Division of State IGE Networks. The division of each state according to the present idea of council membership in the Council of Representatives of the national organization would have a representative of one state education agency, or a regional state education agency from each of the states, one from a teacher education institution and one from a local education agency. The attempt here is to get teachers, school administrators, teacher education personnel and the state education agency to form the networks in that state to represent that state in the Council of Representatives. Then there is an executive committee

FIGURE 1


Reps. SEA-1, SEA-2, SEA-3, ...
of State Ed. Agency,
including IGE Coordinator
Reps. TE-1, TE-2, TE-3, ...
of Tchr. Ed. Insts. of State
Reps. SPC-1, SPC-2, SPC-3, ...
of SPCs of State
SEA-1
TE-1
Reps. REA-1, REA-2, ...
of Regional Education
Agency 1
SPC-1
SPC ...
SPC ...
SPC of school district 1 of Region 1
SPC of school district 2 of Region 1
SPC of school district 3 of Region 1
SEA-2
TE-2
Reps. REA-1, REA-2, ...
of Regional Education
Agency 2
SPC-2
SPC ...
SPC ...
SPC of school district 1 of Region 2
SPC of school district 2 of Region 2
SPC of school district 3 of Region 2
SEA-3
TE-3
Reps. REA-1, REA-2, ...
of Regional Education
Agency 3
SPC-3
SPC ...
SPC ...
SPC of school district 1 of Region 3
SPC of school district 2 of Region 3
SPC of school district 3 of Region 3
State IGE Coordinating Council (SICC)
Regional IGE Coordinating Council (RICC)
System-wide Policy Committees (SPC)

Organizational Arrangements of State-Regional-Local IGE Networks
(Source: Walter & Klausmeier, 1973)

from that large group. If you look down now at the Division of State Networks, you will see then that people that have leadership roles in certain state networks will also be involved in forming the national policy as members of the Council of Representatives. This will ensure that there is proper communication between the population of that state and people at the national level. This I think is the great strength of the MUS organization. Out of the 2,000 IGE schools, we don't know a single one that got started and had a functional Instructional Improvement Committee that is not still an IGE school. And we think it's because this type of an organizational arrangement permits people to be the communication links between two levels in the organization. It also permits people with common interests to be mutually supportive of one another. If you will turn now to the other chart that says "Organization of State, Regional, Local IGE Networks" (Figure 2). Let me interrupt your viewing to ask how does someting like this come about? Well, it comes about like the MUS Organization does. I talk to people like Les Bernal and they tell me what is going on within their state; after finding out what is going on in ten or twelve or fifteen states of the nation I try to summarzie those ideas, synthesize them and come up with something that is compatible to what each of those states is doing and is compatible with the concept of IGE. And this is how we get a chart of this kind. At no time would I propose how people within any state should organize. What is here is some ink on paper and to the extent that this ink on paper may serve as helping some of you to decide what you want to have in your state eventually. This is fine and that's all it is; there is no prescription of any sort. Here is the possibliity of how a state might organize. There might be a state coordinating council. That state coordinating council might include representatives from the state education agencies, perhaps the persons responsible for elementary and secondary education and teacher education educational innovation within a state, innovative programs of research and development within that state. We feel that every state should have one full-time IGE coordinator supported by the state education agencies. We know that within those states where that is accomplished, starting at least as early as 1970, this has proven a very wise

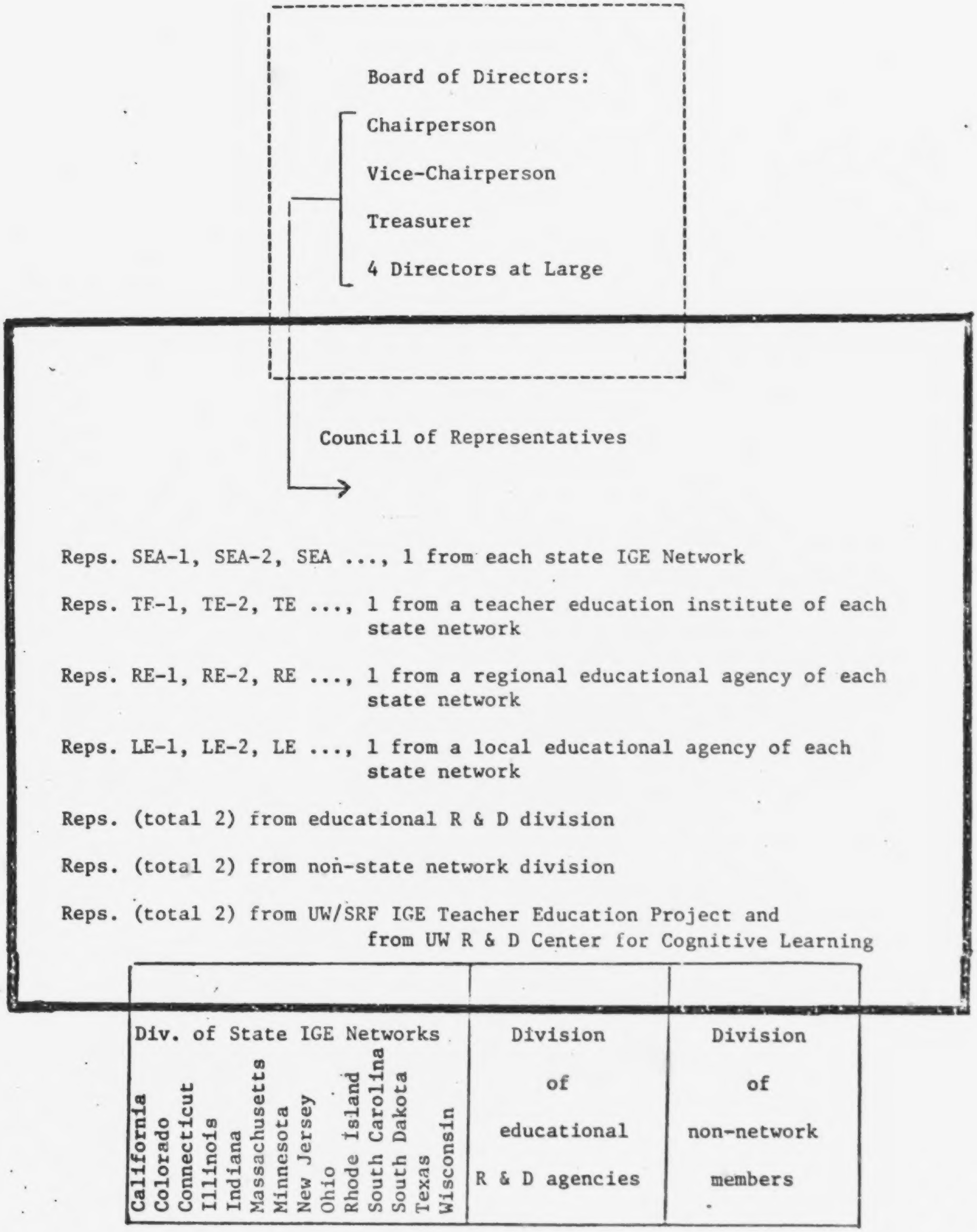
FIGURE 2

Responsible Agency	Provide in-service to get IGE/MUS-E's started	Provide in-service to IGE/MUS-E's during first two changeover years	Provide short intensive institutes for experienced IGE personnel	Provide on-campus preservice education for prospective teachers and graduate education for prospective unit leaders and principals
State Education Agency or Regional Agencies of SEA	1*	1	2	
Teacher Education Institution	2	3	1	1
Local Education Agency	3 (for its own schools)	2 (for its own schools)	3 (for its own schools)	

*1 indicates that the agency will probably take major initiative in most states;
2 indicates that the agency is less likely to take major initiative but should be involved in planning;
3 indicates least likelihood for assuming primary responsibility for the function.

Major Functions of the State Education Agency or Regional Education Agency, Teacher Education Institutions, and Local Education Agencies in Implementing IGE (Source: Klausmeier & Walter, 1972) investment of state money. Then at the state level, we feel there should be representatives of the teacher education institutions of that state who plan for or start bringing IGE concepts into their pre-service or graduate program. We feel also that at that state level, there should be teachers, school building principals, administrators and school district administrators. These would be the representatives of the various leagues or school districts within that state. To get that communication link between the state education agency and the regional coordinating council - and you know a little state like Rhode Island might not have regional coordinators while a state like Texas or California might have fifteen. And as for a state like Massachusetts, I don't have any idea as to what kind of a pattern might be appropriate here. As there are a number of interested school districts, it appears to me that what might be done to get the communication links so that the right kind of decision-making is taking place at the state and regional level, a representative from the state education agency and a teacher education institution of a given region plus representatives of the regional education agency, plus persons from the leagues or school districts might form that regional group. Then, down at the local school district level, there are your school district people. What would happen under this kind of arrangement is a kind of working together: communication through people and by people; mutual support of one another which within a state hopefully would do what is happening in IGE schools. In IGE schools there are the units which correspond here to the school districts. Each has a unit leader. That unit leader with the building principal are the Instructional Improvement Committee for the building, that's what corresponds state-wide to the regional coordinating council here. Then, the principal and some of the unit leaders in turn serve on a school district committee as soon as there are two, three or four within that school district. So far as we know, and R. Pellegrin who is an expert in the field of social psychology, Jim Lippin, one of the top leaders in the field of school administration, feel that this communication link whereby people serve on groups at two levels is a very powerful way of getting people together who have common interests. I think this may be one of the problems in our civil government. At the present time, we have a group of people in Washington: they are our federal government. We have another group of people in our state: the state government. We have local government and there aren't any of these officials who hold membership in both governing groups. As a result, we have a lot of friction between the federal and the state governments and often less than perfect cooperation between the state and local school districts when it comes to supporting public education and other matters. I would hope that without getting into any form of formalized organization, but an informal organization, that people who wish to work together, local people who understand their needs at the local level work with people at the regional level. People who understand the needs of the region work with people at the state level and this is what is implied by this kind of an organization. What the organization is going to turn out to be in the various states I am completely uncertain. What it should be I don't know, but we stand ready with what little staff we have in support of the Merrimack Education Center to help you organize some type of organization within your state which I think can be very effective in better meeting the needs of the children in your local school districts for higher quality education and better meeting the needs of your college students for a higher quality education for those students.

Now we have some more ink on paper (Figure 3). What I've done here is to summarize what's going on in some states that started IGE programs on a state-wide basis as early as 1968,1969 and 1970. As Les has indicated, schools need assistance to make the changeover. In many states this has been accomplished by persons in the state education agency or a regional education agency. Here in Massachusetts it's been the Merrimack Education Center with some support from a teacher education institution. In some states the teacher education institutions are doing this; they are working directly with the local schools. Large school districts also may have the capability for supporting a full-time facilitator or another person to help the schools of that district make this kind of changeover. When the school makes this kind of changeover, and normally if a school wishes to do this it starts participating in an in-service program in the spring of one year, by the fall it may be ready to make the changeover. But, over the next couple of years it needs continuing support. Not all teachers always want to work together as effective



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Reps. SEA-1, SEA-2, SEA ..., 1 from each state IGE Network

Reps. TF-1, TE-2, TE ..., 1 from a teacher education institute of each state network

Reps. RE-1, RE-2, RE ..., 1 from a regional educational agency of each state network

Reps. LE-1, LE-2, LE ..., 1 from a local educational agency of each state network

Reps. (total 2) from educational R & D division

Reps. (total 2) from non-state network division

Reps. (total 2) from UW/SRF IGE Teacher Education Project and from UW R & D Center for Cognitive Learning

Div. of State IGE Networks	Division of educational R & D agencies	Division of non-network members
California Colorado Connecticut Illinois Indiana Massachusetts Minnesota New Jersey Ohio Rhode Island South Carolina South Dakota Texas Wisconsin		

Organizational Chart of Association for Individually Guided Education (Based on Proposed Bylaws for the Association for Individually Guided Education) members of the team. Not all principals know how to work effectively with unit leaders. Some of them don't know how to develop a good agenda. Some building principals don't know how to work with their community to find time during the school day for teachers to plan. Many of them have problems in individualizing instruction in particular curriculum areas. Here, personnel from teacher education institutions, regional agencies, can work together to provide this kind of in-service education so that over a period of years each IGE school becomes increasingly capable of a self-renewing process through its' own staff development program. In Wisconsin, we started this program a little earlier, in 1968. We found that even though the state education agency did a pretty good job of helping them get started, as new curriculum materials come along, as new problems are encountered, a teacher education institution can offer short intensive institutes for one or two weeks. Or they might even offer courses of two to three credits where the teachers of IGE schools have an opportunity to get together; they have an opportunity to acquire new skills and competencies that they need to solve some of their own problems. As I see it in the foreseeable future, it's likely that the pre-service education programs for prospective teachers will continue to be conducted by colleges and universities rather than by any other agencies. Similarly I see that the graduate programs will probably be conducted primarily by colleges and universities. I would point out, however, that in line with the idea that we work together on these things it would seem that some of our experienced administrators, unit leaders, and teachers can be very helpful resource personnel to colleges who might attempt to offer this kind of work. What I have tried to do in a few minutes is to indicate where things are now and what the possibility is where they might be two to five years hence. I have nothing but the greatest confidence that you here in Massachusetts will proceed as similar to what is happening in some of the other states. You will find ways of mobilizing a few more of your intellectual resources, monetary resources that exist in the state education agency, regional education agencies, teacher education institutions, to bring this form of alternative schooling to a larger number of the children in the state. It seems to me that the time has come when, if public education is to start going upward, teachers and principals should be able to choose in most larger school districts at least, two differenct kinds of schools in which to teach. It appears to me also that parents should be able to choose two different kinds of education for their children. At the present time, our system of public schooling and our system of private and parochial schooling gives that choice somewhat but if one takes the private group, it is at substantial expense to the parents. We know that age-graded classes served its purpose for some one hundred years now: society has changed greatly: the time has come to make available this alternative form of schooling.

CHAPTER IV

Section 4

COMPETENCY-BASED PROGRAMS: UNDERGRADUATE AND GRADUATE LEVEL PROGRAMS

DR. WILLIAM BECHTOL
Chairman
Education Department
Southwest Minnesota State College

INTRODUCTION TO DR. WILLIAM BECHTOL

Recognizing that teacher education has direct relationships to what happens in the classroom and that both are subject to reciprocal influences, Dr. Bechtol describes a program of "competency-based teacher education" working in concert with multiunit schools that employ Individually Guided Education. Developing these "new partnerships" ensures a field-based program to change teacher education. The teacher education institutions and public school systems form partnerships whereby there is direct dialogue between these two representative organizations. The public schools thereby gain more control over the training of new teachers thus ensuring that programs are meaningful in relation to existent problems. Real change and reform in teacher education, of a performance based nature, is reciprocal with the educational revolution in the elementary and secondary schools. Dr. Bechtol supports the contention of Benjamin Rosner:

> It does little good to educate preservice teachers under one philosophy, one set of principles and practices, if there is no market for their considerable achievements once they leave the university; nor is there much chance that what is learned in college will be perpetuated if schools do not endorse or practice the same philosophy.[1]

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[1] Benjamin Rosner. The Power of Competency-Based Teacher Education. New York: Allyn & Bacon. 1972.

DR. WILLIAM BECHTOL

I apologize because you are in the same learning mode all the time; one that a number of schools have built large rooms for and they're empty all the time because we haven't found it as effective as some of the other modes. I'm delighted that Dr. Klausmeier's here and I haven't met anyone else who's working right with kids now and I at times feel a little guilty because I've been out of public school for five years. I'd like to get back and that's the thing I've found, teaching in a college; that I have had a hard time adjusting to and that there are no elementary kids around. We had a motto back in our school district that says, "Children, like fingerprints, are all different". I share that with you and then we're going to treat you all the same. I apologize for that; but the motto has meant a lot to me because I had a parent group that after I'd spent fifteen years in Pipp City, Ohio, a suburb of Dayton, where we had a non-graded school system K-12, gave me a plaque that hangs in the study now that says that children like fingerprints are all different. So it's a motto that I feel rather good about. I've had a chance to move to a new college, Southwest Minnesota State, that was set up in a rural area of Minnesota to try to do some of the things that Al, our first speaker, talked about. . . to try to do some of the great things to serve the community. We've had a direct cooperative arrangement with school districts where we've set up three leagues, 24 IGE schools. We've been one of the original movers in this program and I'm going to talk to you about a competency-based teacher education program where we've trained people to work in IGE, or open, or non-graded schools. And it may be that I tell you more about competency-based teacher education than you've ever wanted to know. And, you may have the problem. . . I don't mind the government withholding information. When the educational system is so eager to share it that bugs me. We'll talk about CBTE and coming directly from schools, I had a whole relearning experience. We've set up this model for us. . . with a model things are always more complex than they seem. I've set up this model fairly simply, but when you get into CBTE you really do some rethinking about how you train teachers and what a teacher should know and be able to do. That's the question! We've really been working for the last five years to answer this question. Thank goodness that IGE came along and we knew something about non-graded and the British Infant Schools, so we had some things to look at and say, "Here are some things that people need to know and be able to do".I use CBTE and PBE (performance based education) directly as synonyms and I do that directly back and forth. I don't know if there's a difference.

Some schools have been resource based where they think the difference in teacher education depends upon resources. . . the number of resources you have, how many of your staff have Ph.D.'s and how many books are in your library and how many courses do you offer in this and how many in that. There are others that focus on experience-based - how many micro-teachings do your students have to do and how many student teaching experiences do they have and what kind are they and things of this nature. The movement towards CBTE or PBE really focuses on that question that I indicated you would need to answer if you ever go this way. What does a teacher need to know? What skills does he need to be able to demonstrate? What skills can he do on campus and what kind of consequence skills does he have to do in the field with students? I'm going to limit my remarks this morning to a pre-service, undergraduate program but the same ideas will work in a graduate program as they're finding at the University of Wisconsin at Eau Claire and the University of Toledo as they're moving towards in-service programs. We're in just the embryo stage in graduate education at Southwest, being a new institution. Some of you are administrators so I'll show you just briefly how we're organized. We want not to have separation as exists in many colleges between elementary and secondary education. We're organized into three centers. The Center for Educational Studies does educational psychology and child growth and development, learning theory, evaluation, motivation study, things of this nature. The Center for Management of Educational Systems, which I chaired for four years, takes care of classroom management, school organization. Secondary and elementary school programs are managed through this Center. The Center for Applied Instruction is our joint marriage between public schools and the college in the training of pre-service teachers. This group is responsible for field experience, micro-teaching, observation, and student teaching internships, things of this nature.

When we first got into the program, studying the field of teacher education, we came across the Comfield Model. This is our version of that. . . and we rejected it. We have no business as a staff identifying what pupil outcomes should occur in an elementary or secondary school. That is what CBTE ends up being all about. We had a year of floundering until we jointly brought school people together with our staff and spent a chunk of time in a step I'll talk about in a moment called "we agree" . . . we identified the pupil outcomes

	RESOURCE BASED PROGRAMS	EXPERIENCE BASED PROGRAMS	PERFORMANCE BASED PROGRAMS
Performance Criteria are			
People who meet performance criteria are	⇨ ⇨		

ORGANIZATION OF DIVISION OF EDUCATION

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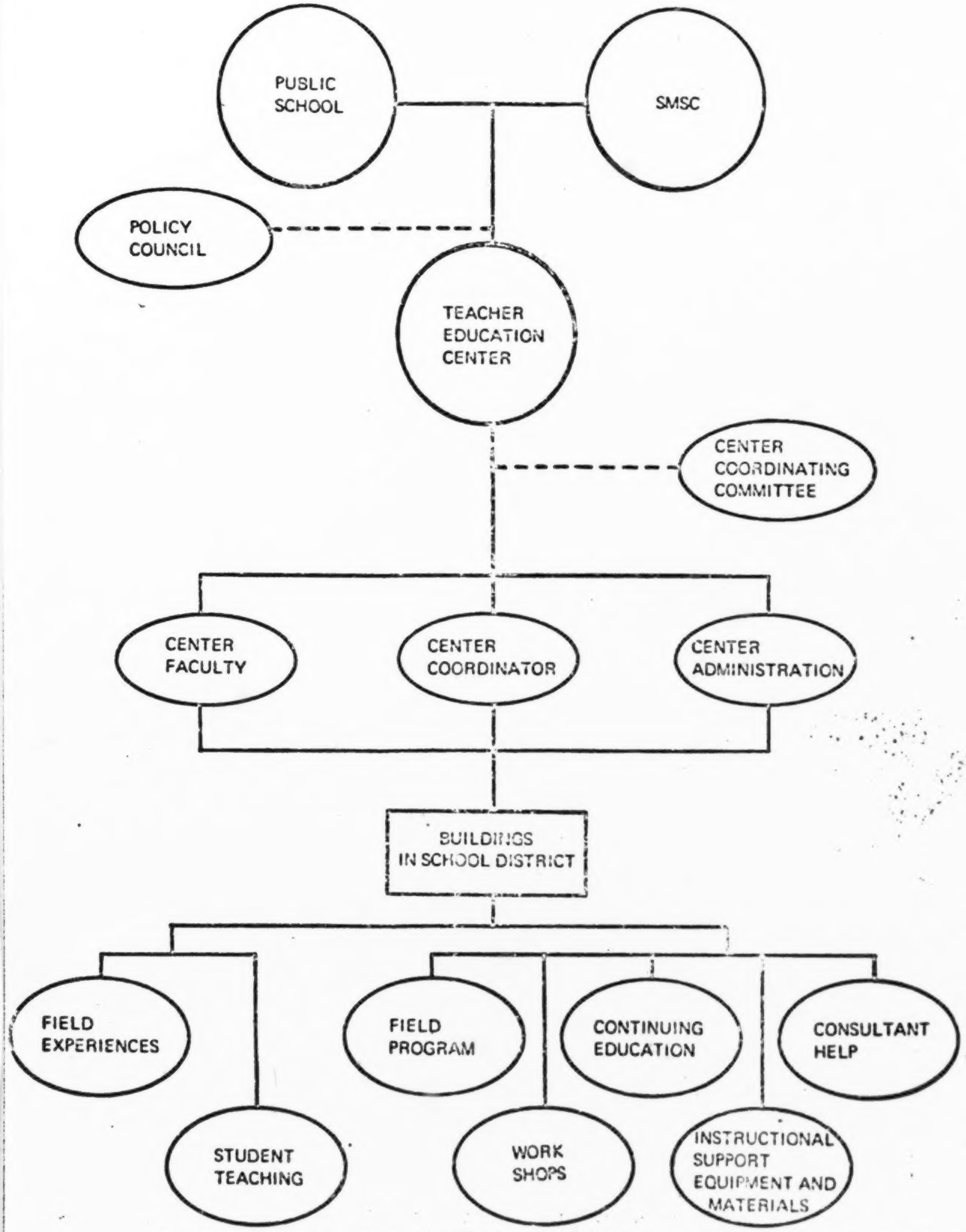
MEDIA SUPPORT

TEACHER EDUCATION CENTER


PUBLIC SCHOOL
SMSC
POLICY COUNCIL
TEACHER EDUCATION CENTER
CENTER COORDINATING COMMITTEE
CENTER FACULTY
CENTER COORDINATOR
CENTER ADMINISTRATION
BUILDINGS IN SCHOOL DISTRICT
FIELD EXPERIENCES
STUDENT TEACHING
FIELD PROGRAM
WORK SHOPS
CONTINUING EDUCATION
INSTRUCTIONAL SUPPORT EQUIPMENT AND MATERIALS
CONSULTANT HELP

that are desired in an elementary school as we saw it. Then we asked, "What kind of conditions bring about these outcomes?" We identified at the elementary level, the IGE model, the non-graded model, or the open British primary model which were the three models available that came closest to delivering pupil outcomes that we thought should occur. Then, we had a task of considering what the teacher education program should begin to look like and we focused on our own goals for teacher education, identifying the competencies that the teachers needed to have to bring about these desired pupil outcomes and then worked on teacher education. Now we tried to start here, step three. We tried to avoid steps one and two. People would get out in schools and they thought we were out of our minds. You say this is what schools are and this is not what we see teachers doing out there. We had to have this kind of marriage between public schools and our philosophy because students always believed what was happening out there was real and what we were telling them on campus was really nonsense. We tried to tell them that IGE was really happening and they'd say where? So we had to get into that kind of thing and develop IGE schools, become a service developing non-graded programs. Three models, or two really, helped us a great deal. . . I'll talk about this one. It frankly has a lot of the management system for our program. You will receive some of these materials in an article that I have written on teacher education that has been developed including this model. We thought that if you wanted to have five teacher competencies, that the teacher needed to have, needed to know and be able to do, they would be the following. They had to know what to teach, that's number one. If they knew how to teach, they had to be able to get that into some kind of manageable system of translating goals into objectives and things of this nature. They had to be able to know what the student knew about the objective they wanted to teach. So the whole concept of pre-assessment had to be there and we'd reassess in terms of the objective, in terms of learning style, in terms of motivational style, this whole thing. Then after they had chosen this, they needed to select materials, activities and reinforcement for the learner. With pre-service teachers, that means you had to teach them all about the curriculum materials, the various options that are available and things of this nature. Then they had to be able to run the thing. . . Bill telling me about his junior middle school IGE project where teachers are teaching and having kids in packages, working with learning stations, small groups, things of this nature . . . the teacher who is pre-service who does what I'm doing, stands up and lectures. . . there is a lot of unlearning and relearning to get into this next step and that's

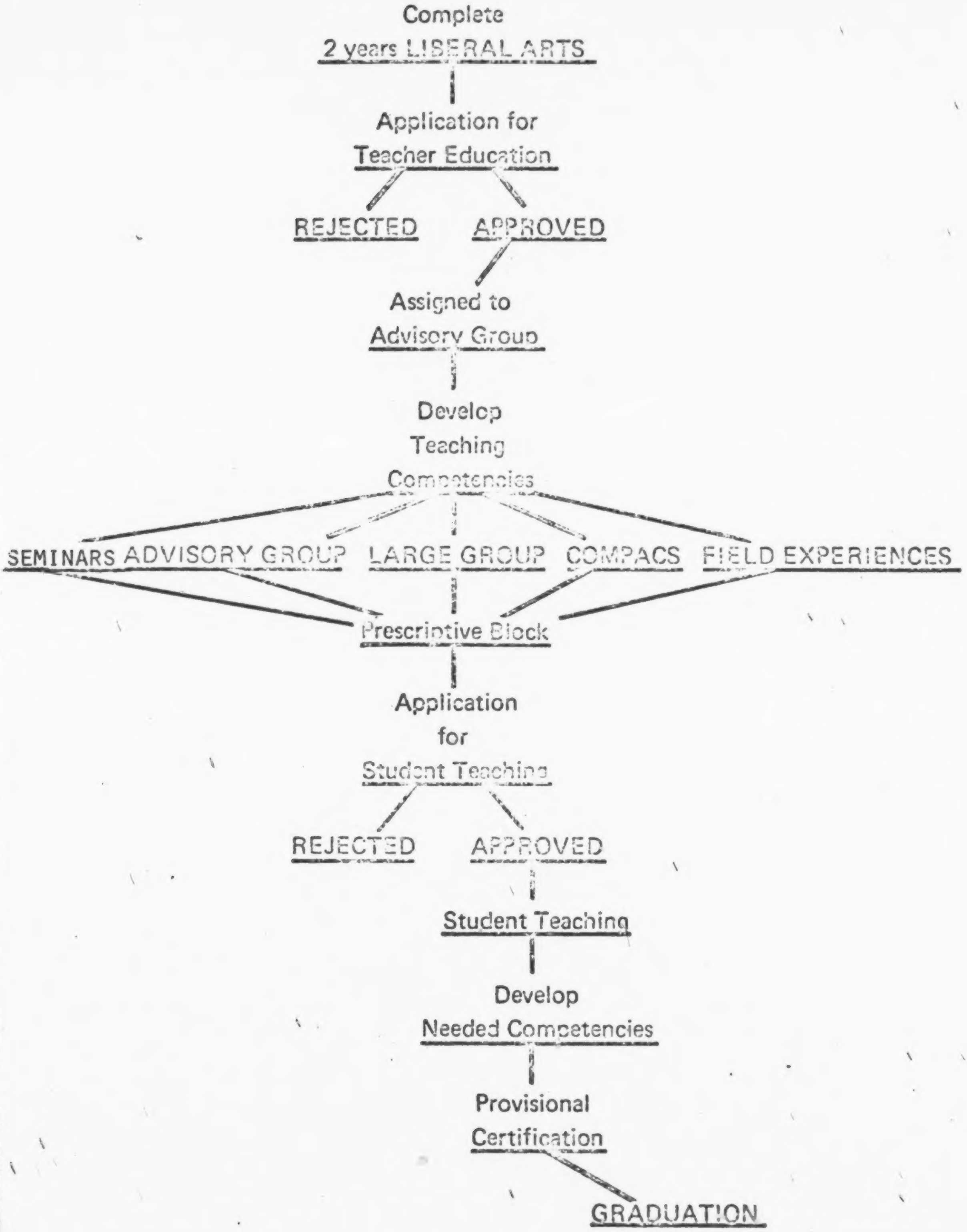
STEPS IN THE DEVELOPMENT OF PERFORMANCE-BASED TEACHER EDUCATION

1. IDENTIFY THE PUPIL OUTCOMES THAT ARE DESIRED.	2. IDENTIFY THE CONDITIONS WHICH BRING ABOUT THESE DESIRED PUPIL OUTCOMES.
(GOALS OF EDUCATION)	(THE INSTRUCTIONAL PROGRAM WITHIN THE SCHOOLS)
3. IDENTIFY THE COMPETENCIES NEEDED BY TEACHERS TO BRING ABOUT THE DESIRED PUPIL OUTCOMES.	4. IDENTIFY THE CONDITIONS WHICH BRING ABOUT THESE TEACHER COMPETENCIES.
(GOALS OF TEACHER EDUCATION)	(THE TEACHER EDUCATION PROGRAM)

the hardest one. We'll talk about some of the ways that are effective. Then they have to evaluate the process so they can make a decision if they have to go back to more activities or if the student is ready to go on to new objectives. Our system is all packaged in Unipacs. . . so one of the alternatives in teacher education is a unipac on each one of these ideas. We have about 300 of them now, currently. These are computer managed so we can get a computer printout immediately to talk about where a student is in any part of the program, what prescription he might need next and what choices he has next. This model affected us a great deal and tends to run our program. This one that you've heard about gave us direction to work with the schools.

We were setting up our first IGE schools in 1970 and we have been moving and probably have fifty in Minnesota now and we directly work with forty-five of them. The first thing we did, and if you haven't done this, you as a division of elementary education or what department, just sit down and put on the chalkboard "WE AGREE" and then go through and see what things your staff can agree to. We open this always to the people of our teacher center. We don't just talk to each other, we try to have immediate dialogue within the field. We try to talk about the things we believe. Now this is dated and we have four of these sessions within this time period. I'll show you another one - Number Ten. Number Ten is teachers teach as they've been taught but they can change. Out of this philosophical statement we decided that having courses was not a good idea and if you were going to teach people how to work in an IGE school, maybe you just taught that way rather than talked about it. So you individualized instruction rather than have lectures on individualized instruction like you're receiving now. If you haven't tried the model for your teachers and the way you want them to teach then that's a whole different kind of thing. I spent a chunk of my time with the teacher advisor role; a chunk of my time devising learning activitiy packages; these are options. If you don't know the "we agree" steps, I/D/E/A has now published a book called the "We Agree Handbook". We knew we had to make a statement about human relations and we never could get one. We had a whole other chalkboard of things that are important but we can't agree to them - these kind of things that we couldn't build a we agree statement. This is the best way for us as we were growing because we were a small group and then the next year our division of education doubled in size. Going through the "we agree" step again gives new staff members some ownership in the program. . . it's the best kind of thing. I learned it from the principal of Meadowbrook Junior High School in Newton, Massachusetts who

FLOW CHART OF SOUTHWEST ELEMENTARY EDUCATION PROGRAM


Complete
2 years LIBERAL ARTS
Application for
Teacher Education
REJECTED
APPROVED
Assigned to
Advisory Group
Develop
Teaching
Competencies
SEMINARS
ADVISORY GROUP
LARGE GROUP
COMPACS
FIELD EXPERIENCES
Prescriptive Block
Application
for
Student Teaching
REJECTED
APPROVED
Student Teaching
Develop
Needed Competencies
Provisional
Certification
GRADUATION

BASIC ASSUMPTIONS UNDERLYING PROGRAM DEVELOPMENT

IN TEACHER EDUCATION PROGRAMS DIVISION OF EDUCATION

SOUTHWEST MINNESOTA STATE COLLEGE

WE AGREE:

1. PEOPLE ARE DIFFERENT.
2. THE STAFF OF THE EDUCATION DEPARTMENT IS A TEAM.
3. THE INDIVIDUAL IS IMPORTANT AND SHOULD BE RESPECTED.
4. LEARNING IS AN INDIVIDUAL TASK.
5. TEACHER EDUCATION IS AN ALL-COLLEGE EFFORT.
6. PEOPLE LEARN IN DIFFERENT WAYS.
7. TEACHER EDUCATION SHOULD BE A COOPERATIVE EFFORT BETWEEN THE COLLEGE AND THE AREA.
8. THE TEACHER EDUCATION PROGRAM SHOULD BE OPEN-ENDED AND FLEXIBLE.
9. TEACHER CANDIDATES SHOULD BE ABLE TO PARTICIPATE IN THE CHANGE PROCESSES.
10. TEACHERS TEACH AS THEY HAVE BEEN TAUGHT, BUT THEY CAN CHANGE.
11. A TEACHER EDUCATION PROGRAM SHOULD BE ORGANIZED AROUND THE DEVELOPMENT OF TEACHER COMPETENCIES.
12. COMPETENCY MEANS THE DEMONSTRATED ABILITY TO PERFORM A TASK.
13. EDUCATION IS ESSENTIALLY A MORAL ENTERPRISE.
14. SELF-ACTUALIZATION IS AS IMPORTANT AS ENCULTURATION.
15. THE ROLE OF THE TEACHER IS A MANAGER OF THE LEARNING ENVIRONMENT.
16. INSTRUCTIONAL STRATEGIES MUST RECOGNIZE THAT THERE IS A DIFFERENCE BETWEEN MEN AND WOMEN.
17. A STUDENT LEARNS BEST IF HE EXPERIENCES SUCCESS. PERFORMANCE OBJECTIVES SHOULD POINT TO SUCCESS.
18. THE TEACHER EDUCATION PROGRAM SHOULD RECOGNIZE THAT THERE ARE VARIANCES IN LEVELS OF COMPETENCIES.
19. TEACHER EDUCATION SHOULD BE BASED ON A CONTINUOUS PROGRESS CURRICULUM.

STUDENTS IN TEACHER EDUCATION SHOULD BE EXPOSED FIRST-HAND TO A CULTURE DIFFERENT FROM THEIR OWN (SOCIAL REALITY).

STUDENTS IN TEACHER EDUCATION MUST BE INVOLVED IN DECISIONS ABOUT PLANNING, EXECUTING, AND EVALUATING THEIR OWN PROGRAM.

ADVISORS ARE INVOLVED IN STUDENT DECISIONS ABOUT THEIR EDUCATIONAL PROGRAMS.

TECHNOLOGICAL RESOURCES PROVIDE A MEANS FOR ACHIEVING EDUCATIONAL GOALS MORE EFFICIENTLY AND ECONOMICALLY.

THE SYSTEMS APPROACH TO ANALYZING INSTRUCTION MAXIMIZES THE OPPORTUNITIES FOR LEARNING.

HUMAN RELATIONS ARE:

taught our staff in Pipp City the "we agree" step and we've carried it around and used it a long time. So our elementary program works like this - we have a lot of liberal arts entry into the college and then a lot of junior college transfers. So our program starts at the junior level where they develop a major concentration. We train them immediately for team teaching; we don't think there's a place for the well-rounded elementary teacher; so we train them for a teaming situation where a person would have expertise in science or language arts or things of this nature.

A BRIEF REVIEW OF A COMPETENCY-BASED TEACHER EDUCATION PROGRAM INCLUDING IGE AT SOUTHWEST MINNESOTA STATE COLLEGE*

Founded in 1968, Southwest Minnesota State College's first class of seniors graduated in 1971. The planners of SMSC's teacher education program were in the position of being able to design a program without hindrance of long-standing tradition. Nor did the education faculty have to expend energies attempting to reallocate resources for a new program. Designers were able to plan a program to prepare teachers for the 70's and 80's.

In developing the teacher education program, four tasks were identified: (1) the desired pupil outcomes (the goals of education), (2) the conditions which bring about the desired pupil outcomes (the instructional program within the schools, (3) the competencies needed by the teachers to bring about the desired pupil outcomes (the goals of teacher education), and (4) the conditions that bring about these competencies (the teacher education program). The Southwest Minnesota State College Education Division staff decided that teacher education must be competency-based, field-centered, personalized, and systematically designed.

A model for instructional management provided a plan for organizing the curriculum for the teacher education program, for teaching competencies, and for the teacher's use as an employee in the public schools.

Used for organizing the curriculum for teacher education, the model helped identify what a teacher needs to be able to do. The teacher needs competencies in (1) specifying educational objectives, (2) determining conditions of the learner in relation to the specific objectives, (3) selecting, preparing, and using appropriate materials, activities, and reinforcements for the learner, (4) organizing and managing the variety of learning environments which promote personalized instruction, and (5) evaluating procedures to determine if mastery of the educational objectives has been achieved.

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*Bechtol, W. M., "The ComPac: An Instructional Package for Competency-Based Teacher Education," EDUCATION TECHNOLOGY, September, 1972.

In deciding these competencies, the staff had to predict what schools would be like in the future. It appeared to the Southwest staff that Individually Guided Education in the Multiunit School-Elementary (IGE/MUS-E) provided an appropriate model for training elementary teachers for the 70's and 80's. Clusters of competency packages and field tasks were designed to provide a preservice or inservice teacher the required competencies to teach in IGE schools. The clusters are written in behavioral objectives that are sequenced from knowledge to application. Almost all cluster sequences end with the preservice teacher applying his new knowledge with students in the public school as a part of the field-experience activities.

The Southwest competency-based program is personalized and individualized. Southwest faculty have adapted IGE/MUS-E techniques to their college classrooms. This modeling may be the strongest on-campus component of the program. Preservice teachers truly feel involved in their training. Each staff member is responsible for a group of advisees. He meets with each advisee weekly so that they can jointly evaluate progress, clarify problems, and set goals. He diagnoses needs and prescribes. He facilitates the preservice teacher's achievement of competencies. This process promotes an open, personalized instructional program.

Clusters are comprised of competency packages, seminars, field experiences, and other activities. The individualized competency packages contain the five steps of the instructional management model and are a prototype of the model in action. Students select parts of competency clusters and work on them at their own speed in a diagnostic-prescriptive program.

Up to the present, the number of competency packages completed, seminars attended, or other work contracted has determined completion of the elementary program. Currently, however, measurable field tasks are being identified. These tasks will be used to determine if the preservice elementary school teacher can demonstrate the required competencies which lead to certification as an elementary teacher.

Competency packages contain knowledge objectives which can be learned at the college and application objectives which must be learned in elementary school classrooms. The Division of Education staff decided that application objectives could be met best in the public schools by means of the "teacher education center" concept.

The teacher education center approach is a coordinated program of preservice and inservice experiences planned and administered cooperatively by the college and the public schools. The program is designed to serve the needs and interests of the experienced professional as well as those of the inexperienced undergraduate student. An individualized approach makes it possible for each to become a student of teaching in accordance with his own particular stage of professional development. Organizationally, the teacher education centers at Southwest Minnesota State College have been

DOCUMENT RESUME

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Descriptors	Teacher Education, Individualized Instruction Instructional Materials, Behavioral Objectives Curriculum Development, Program Descriptions
In	Southwest Minnesota State College

This abstract describes the approach to teacher education that is based upon competency packages (ComPacs). ComPacs contain behavioral objectives that are sequenced from knowledge to application for pre-service teacher training. ComPacs are designed to provide pre-service or in-service teachers with competencies to teach in the IGE/MUS-E school.

THE ComPac: An Instructional Package For Competency-Based Teacher Education

William H. Bechtol
Educational Technology
September, 1972

Southwest Minnesota State College is new. Five years ago the spot where the College now stands was a cornfield. Today this corfnield has been transformed into modern structures designed to educate students in new, exciting and promising ways. In June 1971, the Charter Class graduated from Southwest. One group of these students had a unique educational experience. They are the first graduates of a competency-based teacher education program. This articles focuses on this program and the instructional packages that have been developed to achieve it.

In developing this program, the staff of the Division of Education explored the question, What does a teacher need to know and be able to do? As they sought answers from teachers, public school administrators, trainers of teachers, state department of education personnel and researchers in education, the key idea that emerged was the concept of competency-based teacher education.

It appeared obvious that if the aim of teaching is learning, there should be evidence that pre-service teachers can bring about appropriate learning in students before they assume responsibility for such learning in the classroom. The development of a teacher education program that generates this kind of evidence is mandatory.

While developing a competency-based teacher education program, several tasks were identified. The pupil outcomes that are desired (the goals of education) must be identified. The conditions which bring about the desired pupil outcomes (the instruction program within the schools) must be identified. In developing this program the Southwest Minnesota State College Education Division staff found that competency-based teacher education must also be field-centered, individualized and systematically designed. These were new concepts. The idea that teacher certification be based upon tested teaching competencies rather than courses was revolutionary. The idea that these competencies must be tested within the public schools and colleges for training made the program field-centered and at the same time recognized the partnership between public schools and colleges for training pre-service teachers.

It became obvious to the staff in planning this program that it must be individualized; as a matter of fact, the teacher education program began to model what the individualized school program would look like. The design of teacher education was also an important concept. This design had to be purpseful, data dependent and adaptive. With these concepts in mind the Southwest Teacher Education Program was organized.

The traditional plan of separating elementary and secondary education did not seem appropriate for a competency-based program. Many of the competencies required by elementary and secondary teachers are the same. The abrupt division between these two programs seemed to be quite artificial to the planning staff. Consequently, three learning and research centers were organized within the Division of Education to help a student develop necessary competencies for certification.

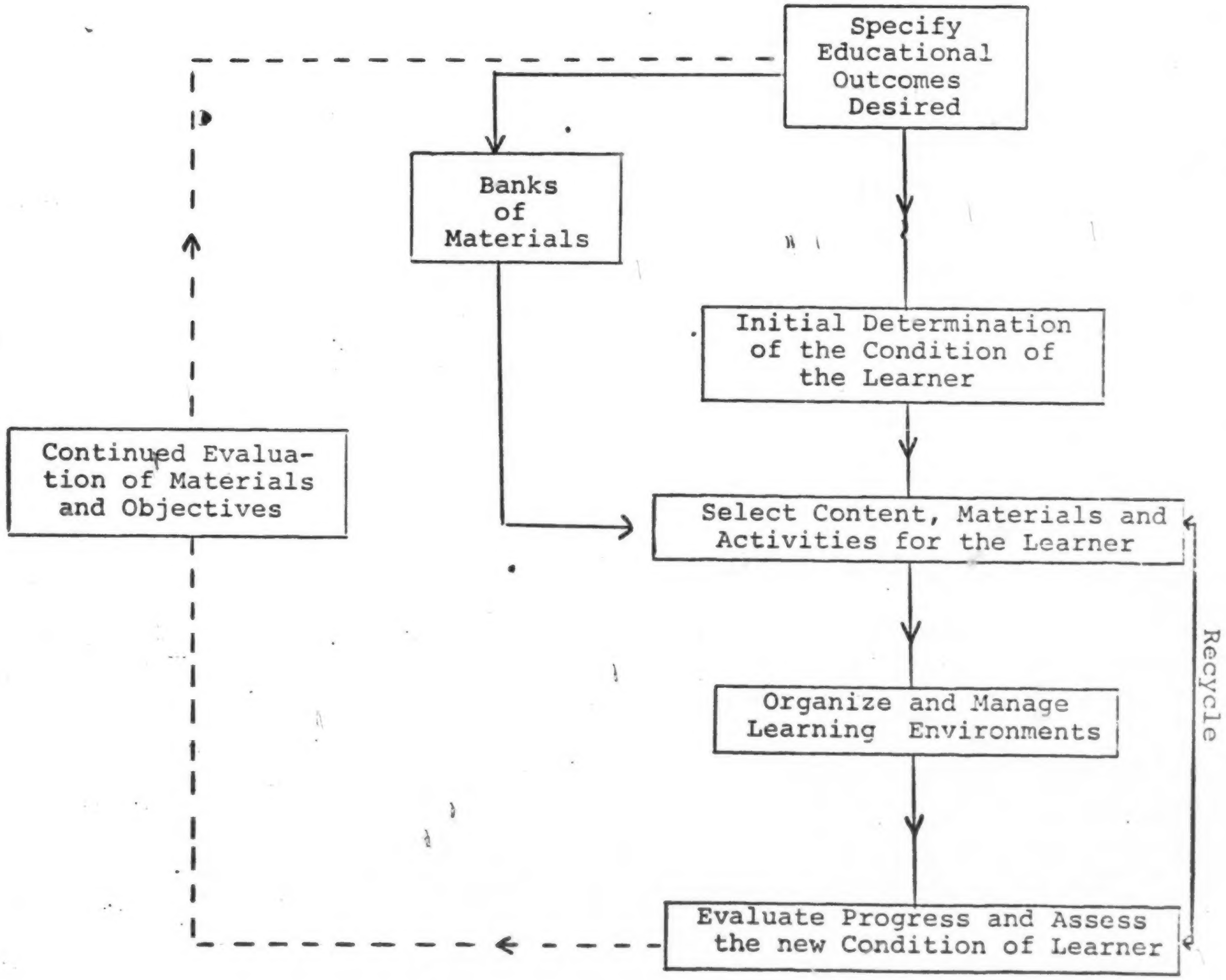
Each of the three centers has specific responsibilities for developing teacher competencies. The Center for Educational Studies is responsible for developing curriculum packages and instructing students in educational psychology, child and adolescent growth and development, learning theory and evaluation. The Center for Management of Educational Systems is responsible for developing curriculum packages and instructing students in classroom management, school organization, curriculum development and the selection of appropriate content, materials and instructional strategies. The Center for Applied Instruction provides the student field experiences so that he can observe, practice, test and finally develop specific teaching competencies. Time for the pre-service teacher to work in the public schools to observe, to microteach and to student teach is provided by this center.

A key step in the development of this program was the acceptance of a model for instructional management. This model provided a plan for organizing the curriculum for the teacher education program; for teaching these competencies; and for the teacher to use once he is employed in the public school. (See Figure 1).

The model was used for organizing the curriculum for teacher education. The model helped identify what a teacher needed to be able to do. The teacher needed (1) competencies in specifying educational objectives which reflect issues relevant to education and to living in our modern-day democracy; (2) competencies in determining conditions of the learner in relation to the specified objectives, (3) competencies in selecting, preparing and using appropriate materials, activities and reinforcements for the learner, (4) competencies in organizing and managing the variety of learning environments which promote individualized instruction and (5) competencies in evaluation procedutes to determine whether mastery of the educational objectives has been achieved.

FIGURE 1

INSTRUCTIONAL MANAGEMENT


Specify Educational Outcomes Desired
Banks of Materials
Initial Determination of the Condition of the Learner
Continued Evaluation of Materials and Objectives
Select Content, Materials and Activities for the Learner
Organize and Manage Learning Environments
Evaluate Progress and Assess the new Condition of Learner
Recycle

The teacher education curriculum is organized into competency packages (ComPacs) which are classified according to the five steps of the model (i.e., those Compacs on Specifying Objectives are classified 1.0; those on Determining the Condition of the Learner are classified 2.0; etc.) This classification system corresponded to the requirements of a computer-managed program which began in the 1971-72 school year. The ComPacs are modeled after the UNIPAC which was developed by I/D/E/A, a subsidiary of the Kettering Foundation. The individualized competency packages contain the five steps of the model and in reality are a prototype of the model in action. Students select ComPacs and work on them at their own speed in an individualized program.

The ComPacs contain behavioral objectives that are sequenced from knowledge to application. Almost all ComPac sequences end with the pre-service teacher applying his new knowledge with students in the public school as a part of the field experience activities.

Figure 2 shows ComPac 1.0111, which is the first ComPac in the behavioral objective sequence. After completion of this ComPac the student should be able to recognize and write behavioral objectives. ComPac 1.0112 teaches a student to write behavioral objectives in the cognitive, affective, and psychomotor domains. ComPac 1.0113 is a field task; the learner develops a behavioral objective (or sequence) for a pupil who is having learning problems. After completion of ComPac 1.0114 the student is able to successfully microteach a behavioral objective to a group of students. One can see how ComPacs are sequenced and how they are designed to permit students to demonstrate competencies.

In deciding which competencies a teacher needs, the staff had to predict the kind of school we will have or should have in the future. The ComPacs are designed to provide a pre-service and in-service teacher with the required competencies to teach in the individually guided instruction program of a multiunit elementary school. This school organization pattern accepts the concepts of non-grading, team teaching, multi-age grouping, continuous progress curricula, differentiated staffing and individualized instruction.

The model is adaptable to the needs of students and those of the community where it is located. It appeared to the Southwest staff that this organization provided an appropriate model for training elementary teachers for the 1970s and 1980s. Southwest faculty teaches in the same manner as the faculty of a multiunit elementary school. In this way pre-service elementary teachers not only study so that they can assume a role in individually guided education, they also become students in such a system.

Figure 2

ComPac 1.0111	Stating Objectives in Behavioral Terms
Context	Specify Educational Outcomes Desired
Major Subject	Educational Objectives
Topic	Stating Objectives in Behavioral Terms
Target Population	Pre-Service Elementary and Secondary Teachers

BEHAVIORAL OBJECTIVES:

1. Given a set of objectives, the student will select those that are measurable objectives by identifying in each given objective the following elements:
    a. A statement of the task the student will perform.
    b. A description of the conditions under which the student will be required to perform the task.
    c. The acceptable level of performance.

2. Given a description of teaching tasks and sources of information, the student will write measurable behavioral objectives.

PREREQUISITE: None required

PRETEST: None for pre-service teachers

For In-Service Teachers who are familiar with the concepts of behavioral objectives, an evaluator will conduct an interview with the learner before this ComPac is begun. If the evaluator feels that the learner understands the area covered in this ComPac, he will instruct the student to take the self-test on pages 56-60 of *Preparing Instructional Objectives* by Robert F. Mager. If the learner misses five or fewer on this test, he may exit this ComPac.

Objective One: Identifying Behavioral Objectives

1. Read: *Preparing Instructional Objectives* by Robert F. Mager.

2. View: the filmstrip-cassette set "Systematic Instructional Decision-Making" (VIMCET No. 55). Write the answer as you view.

3. View: "Educational Objectives" (VIMCET No. 54). Write the answer as you view.

4. Read: *William, Ragan. Modern Elementary Curriculum*, pages 113-125, "Nature and Function of Educational Objectives."

ALTERNATE PLAN: With an overhead projector, view transparency set on Behavioral Objectives available in the lab.

Objective Two: Initial Practice in Writing Behavioral Objectives

ELEMENTARY:

1. Write five behavioral objectives for the following teaching situations:
    a. Teaching directions on a wall map.
    b. Teaching kindergarten children to identify five colors.
    c. Teaching primary children to regroup (borrow) in subtraction.

SECONDARY:

1. Write five behavioral objectives in your own discipline.

EVALUATION:

After you have written five behavioral objectives, show your written objectives to a faculty member (CMES).

MATERIALS:

Mager, Robert F. *Preparing Instructional Objectives*, Fearon Publishers, Palo Alto, California, 1962.

Ragan, William. *Modern Elementary Curriculum*, Holt, Rinehart and Winston, New York, 1966.

Filmstrip viewer and cassette recorder

"Systematic Instructional Decision-Making" (VIMCET No. 55)–filmstrip-cassette set

"Instructional Objectives" (VIMCET No. 54)–filmstrip-cassette set

Overhead projector and Behavioral Objectives transparencies

Summary

The Southwest competency-based program is personalized and individualized. Southwest faculty have adapted IGE/MUS-E techniques to their college classrooms. This modeling may be the strongest on-campus component of the program. Preservice teachers truly feel involved in their training. Each staff member is responsible for a group of advisees. He meets with each advisee weekly so that they can jointly evaluate progress, clarify problems, and set goals. He diagnoses needs and prescribes. He facilitates the preservice teacher's achievement of competencies. This process promotes an open, personalized instructional program.

The teacher education center approach is a coordinated program of preservice and inservice experiences planned and administered cooperatively by the college and the public schools. The program is designed to serve the needs and interests of the experienced professional as well as those of the inexperienced undergraduate student. An individualized approach makes it possible for each to become a student of teaching in accordance with his own particular stage of professional development. Organizationally, the teacher education centers at Southwest Minnesota State College have been five school districts. Coordinating the continuing career development program in each center is a teacher education coordinator. His role is to plan an effective program of laboratory experiences for the college student assigned to teacher education centers and to coordinate an inservice program for center staffs, that is, the regular teachers of the school district who work with the students.

NEW PARTNERSHIPS IN
TEACHER EDUCATION

CHAPTER IV

Section 5

Commissioner Greg Anrig
Luncheon Speaker

Andover, Massachusetts
Rolling Green

CONFERENCE - NOVEMBER 28, 1973

Sponsored by

MERRIMACK EDUCATION CENTER
101 Mill Road, Chelmsford, Ma.

In Cooperation With

Sears Roebuck Foundation Project
and the University of Wisconsin

NEW PARTNERSHIPS IN TEACHER EDUCATION - Conference

Dr. Gregory Anrig, Commissioner of Education of the Commonwealth of Massachusetts

Mr. Hammond, ladies and gentlemen: I am delighted to be here with you this afternoon. The Chairman didn't mention--he said something about having some good judgement so forth. The reason for that, of course, is that I am a graduate of the State College. Secondly, he said that I've served two administrations in Washington; I'de rather be known as the first to have left the last one. He also said that he was told to be brief in the introduction--that's because I told him to be brief and I'll practice what I preach. I'm a little overawed to come here and read through the list of people who are here. I've tried just a little of experience in my career on the university campus and everytime I'm in front of this many faculty members, at least in my role, I was coming for a decision. That was a difficult and I might also say a very long process. My lasting impression of higher education for the short time I was there was the time it takes to get a decision made. I'm sure that's not something that's unfamiliar to those of you who are here in the audience. I'm really very grateful to be here. Anytime that I can in any way, publicly, show my great regard for President Hammond of Fitchburg State College and my support for what he is doing at that particular State institution, I want to do so. I would add to that the kind of things that Dick Lavin is doing at Merrimack Education Center which I find very, very exciting; in fact, in some ways it's competitive with the Department of Education and I like that! Right now you're beating us, but I think we'll be able to catch up. I like that kind of competition and also that kind of creative attention; but I think he's a very imaginative guy and we need more people like that in education. I heard that your morning, and in looking at your program I know this to be true, is a very laden morning and you've had a lot of information cast at you at one time. In fact, one of the people I had lunch with referred to it somewhat like a computer overload. I reassured him by saying that I had nothing of substance to talk about and you could relax at dessert. I'm no expert in anything, but I have had a chance over the last nine months that I've been Commissioner--it seems like nine years; in fact, there are days it seems like ninety years. Over the last nine months, I've had a chance to take a look at this remarkable non-system of education in Massachusetts and do it as somebody, who has at least for a period of time, had his feet in both puddles. Maybe I shouldn't call it puddles; but I've been in higher education; I've been in elementary and secondary education--might be cement, might be more appropriate. I've had a chance to take a look at how things happen--quite apart from the Turf-ishness because personally I don't have time to worry about turf-ishness. There are more important things to get on to. So I found it very interesting to take a look at that and what I'de like to do rather than getting into the details of some of the things that you're considering with people far more expert than I is to just sort of take a broader view of where I see higher education and elementary education at this point in our Commonwealth. I'm conscious of the fact that there are people here today who are from other states--and you have my sympathy. But you're now in Massachusetts, and I welcome you here; this is the unique state we have a tradition of being different--some would say peculiar, but I say different. At any rate, we are happy to have our out-of-staters here, and if I refer too much to Massachusetts, it's only because that's all I know. I wouldn't want to show my ignorance by trying to talk about any other state. I may show it enough by talking about my own. The 1970's as I take a look at not just the last nine months, but the years ahead, because I hope to be Commissioner for more than ten months, as I take a look at the years ahead it seems to me that we're all facing some realities: higher education, elementary and secondary education. And that reality is that our resources are increasingly going to be limited--that we've pretty well gone through the period of quantity and that we are coming into periods of stringency. And at the same time our resources are limited, the cires for our accountability are increasing and heightening. So we are faced with the horns of a dilemma: less resources--more accountability. And that to me, as you add up with simple old or new mathematics means that we've got to do better with what we've got. At the same time that we have that more difficult responsibility, the ground rules are changing. It used to be that if the Superintendent of Schools or College President said this is the way we're going to do it--everybody would say, "fine, let's go do it." Now, if the Superintendent of Schools or College President says, this is the way we're going to do it, there's usually a demonstration, at least three or four petitions and a number of meetings and a bunch of puritans that stems from that. In the case of our schools, the parents are more skeptical, the teachers are more militant, and the students are less accepting indeed authority is fragmented rather than centralized. So we have limited resources and a higher accountability and added to that we have a situation that nobody's in charge because authority now is more divided now than it's ever been. On top of all of this, the one justification that we have always been able to fall back on at your level as well as at mine, increasing enrollments is no longer the case; they are beginning to fade. Indeed, in 1976 the peak in elementary and secondary enrollments will have been reached. In Massachusetts at least, and this is a true statement nationwide, the enrollments are going to start decreasing from 1976 onward. Our figures for 1980 predict that there will be 50 thousand less students in the elementary and secondary schools of Massachusetts, than there were in 1976. [My staff, by the way, refers to that as the Vatican Dip--I don't quite understand what they mean.] These realities are facing our institutions in common--the elementary and secondary schools and the higher education institutions. We're sort of at a cross roads; at my level of education, elementary and secondary education, we are going to have more stabilized teaching courses, because we will have less new teachers coming into the situation. We will also have less mobility of teachers because the job market is drying up, and teachers will stay where they've got the job rather than moving to other places where other opportunities might arise. We also are faced much as you in higher education, I suspect, with a lot of pressures about the results of what we're doing. After all the dollars are going in, what are the outputs, what are the results of all of this investment. We are also finding in collective bargaining that we are, in effect, by legally binding contracts, having to set aside money for in-service education of our staff. And that's not something that's up for grabs-- it's bargained through and you've got to put it into the budget. So the elementary and secondary people over here are faced with those realities. Over here, higher education, and most especially I might say the state colleges, are finding a shift in their traditional emphasis on teacher-oriented-degree programs. One--the number of jobs for the teachers is dwindling, so the number of people coming into the pipeline will be dwindling also. If they are not dwindling now they ought to be, and if they are not now they will be. On the other hand, the teachers who are out in the field, on the job, more and more because of this stability of the teaching force that I mentioned will already have their Master's degree, and the traditional movement from school district to college will be cut down because they traditionally came to you to get the degree for salary purposes. Then you're faced in the colleges with a choice: your budgets are based on your enrollments; your enrollments go down, your budgets go down. You can absorb that and take it; you heard from one of the people last night that a state college out in Kansas cut eighty faculty members this past year, due to decreasing enrollments. Or you can find a new mission that reaches out for new enrollments. Each institution at this point, the higher education institutions over here, the elementary and secondary institutions over here, need each other. They have a vested interest in working together at this point in time. I happen to feel that vested interest is the kind of pre-requisite that you have to have for a change to take place. So we're at an interesting point in time on that. What kind of a change would I suggest is needed? I would propose to you today to at least consider, because it's not in my nature to say this is what you all should do, but at least consider a major re-direction of mission in the state colleges and traditional teacher training institutions, away fromthe large scale preparation of undergraduate level of future teachers and a change in the direction of a large scale re-direction in the training of teachers already on the job... the so called area of in-service education. Now I'm not talking about in-service education in terms of a Master of education degree. I'm not talking about it in terms of more courses or more credits, because that's not needed. I mentioned already that I think the teachers increasingly will already have that. I am talking about a kind of in-service education which is somewhat new to some campuses and new to most campuses on the large scale. Let me mention six characteristics of what I would see as this kind of in-service education. First of all, it wouldn't be something which is in the abstract, but rather would focus upon some very real problems. What some very real teachers are facing in some very real settings. An actual problem in a school district that people actually are facing. Secondly, it would take place in the school district rather than on a campus or an institution of higher education. Third, that the training would be planned collaboratively with those who would participate. The professor could not come and say here is what we're going to do, but rather the professor would come and say what is it that we need to do in order to address this problem that you're confronting here. The participants, not only would participate in the planning, but they would have an active role in what takes place and in the decisions about what takes place, rather than the traditional passive role that all of us have experienced too often. Fourth, I think that the participants increasingly should include administrators as well as teachers and students and parents as well as teachers and administrators. Fifth, that the training leader, the person who comes to help must be just that--ahelper; somebody who is a facilitator and indeed a broker bringing in other resources rather than the person who comes either as an expert or as a one-solution advocate. The last things our schools need in the 1970's is another one-solution advocate. And, I can tell you i"ve had courses from many of them and really they're great and it's a great experience, it's a mind-boggling experience to have when you are taking a course. But when you're teaching in the Mary Curley Junior High School in Boston, and you're worried just about the security of yourself and of the children entrusted to you, and getting through today, you don't need mind-boggling help, you need help. So I would say that the kind of person we need is not the, I won't mention any names because many of them would come from one of my universities, but we don't need more of that kind of help, although that's necessary also in education - I'm not saying that those people don't play important roles, but in this kind of role I think it's not as appropriate. We need somebody who's ready to roll up his sleeves and take some of the same risks that the people you are trying to help take every day. Sixth, the training would be flexible in duration and organization and it could be because you're not delivering a course of course syllables, but rather you're trying to wrestle with the problem. And as with most problems, we don't know what we're going to wrestle with. So you stick until the problems wrestle to the ground. In some cases, that might only be a month; in other cases it might be a couple of years. But that's the kind of in-service training that I think is needed in our schools. I think it offers an opportunity, if that's a real need in our schools, it offers an opportunity to the colleges, which are losing their traditional mission, or at least part of that traditional mission, to take a look at this as a new area to go into. Now, frankly, what this reflects is a shift in the balance of power. When the college is offering degrees it can have admission requirements, it can have grade requirements, it can have all the pre-requisites that it wants to put on it, because you're giving something to the teacher that the teacher basically wants. In this kind of relationship, the college is like the consultant. You've got to convince your client thay you have something to offer him, or her, and that you can come and really be of help. I personally think that shift in the balance of power is very healthy at this point in time, both for the institutions of elementary and secondary education, and for higher education. Now the kind of in-service training I'm talking about is not new to Massachusetts and it's not new in some of the other states that are represented here today. We have, I think, one of the best examples of it right here in this area: Fitchburg State COllege, the Merrimack Education Center, and the Department of Education's Northeast Regional Office have been doing a lot of efforts on a collaborative basis; all three, two of them, one of them, but all of them in the general area of in-service education. They've done it in the IGE that you've been learning about today; they're doing it in special education, occupational education, information dissemination, a whole series of examples of collaborative efforts like this that are problem-oriented in the school sites. There are other state colleges in the Commonwealth that similarly have gotten through this area and private institutions as well. But, frankly, in most of our institutions, this kind of service is still ancillary, rather than a major component. It is something that's done, done well, but generally on a small scale. What I'm proposing is that we take it from that priority and move it up as a much higher priority in our institutions of higher education. The projects we have are a good pathfinders, but they are not yet a major re-direction. Now, I've mentioned about in-service education, and the topic that I was asked to speak to was linkages between in-service and pre-service. Let's take a look at the pre-service education area. In Massachusetts we have two significant changes that are affecting pre-service education. The first is, I've already mentioned, the job market. Last year in Massachusetts there were a total of 60,000 teaching positions. THere were a total of 9,300 new people entering the teaching ranks. Now, these were not all beginning teachers I might add, these are new people coming to Massachusetts and beginning teaching for the first time. They might be experienced teachers from out of state, as well; these figures, by the way, are from our teacher retirement system which I find is a good data base for finding out who's new in the Commonwealth, because you have to join, you have no choice. You don't get your first paycheck until you join. So the 9,300 figure comes from the retirement figures. But that doesn't tell you how many are new teachers; it does tell you that the total universe of openings this past year was 9,300 - and that's not much! And you have a lot of people from out of state, a lot of experienced teachers, a lot of people coming back into teaching who have raised their children and are beginning their career over again - that are included in that 9,300. We had on the other hand 31,000 requests for teacher's certificates, which means that of those who have not at sometime taught or in earlier years than this past year gotten their teaching certificate in Massachusetts, 31,000 asked for first-time teacher certificates. That gives you some idea of the quantity that's available for the number of positions that are open. Down in the southeast part of our state, they formed a group called CAPTA - the school districts have banded together and said they were getting flooded with applications, and they just couldn't even process them. So they got together and had one processing center that serves all of the school districts in the southeast, just to keep up with the quantity of applications, many of which are unsolicited. So the job market is one reality facing the pre-service education.

It would be possible for us, as some states already have for instance, to prescribe by law or by regulation, that you must have, in quote marks, "Competency Based Teacher Preparation." You've gotten one definition of that today and you'll see many other definitions as well. So I'll put that in quote marks. It would be possible for the state to prescribe something like that. That's not the direction I'm taking. That's not the direction I think state leadership ought to go to begin with. A second choice for the state would be to say that we will not prescribe the curriculum, but rather we should prescribe what the certification requirements are at the end of those two years. When someone sits down and has to make a judgment on how that judgment will be made. And then allow the institutions of higher education the freedom to find their own roads to Rome, because I happen to feel that there is not a single road to get to that end point and the more varieties of roads that we have the healthier will be teacher preparation in the Commonwealth. As a delicate balance between what a state must do to carry out state law, and what I believe is a proper relationship between the state and institutions of higher education. My general feeling on this, by the way, is that I believe the State should state clearly what the ends are, and that the flexible means for getting to those ends should be left to the institutions of higher education. The very thought of state bureaucrats, including myself, coming on campus to prescribe what the curriculum is enough to make even a Commissioner shutter. The question is now that we have this change in job market, change in certification laws, what is different about undergraduate and teacher preparation and where does the linkage begin to come between the pre-service education and in-service. The past experience that we've had with teacher education in terms of courses which are required for certification. I think if we look at it honestly and frankly and review whatever research there has been we would see that it is very hard to perceive any effect upon classroom teaching performance from those who have or have not had particular courses now required by law for certification. For instance, in Massachusetts we require educational philosophy, educational psychology, methods, and student teaching. One good thing about our law is that at least if you're going to have it, you didn't have much in. As a Superintendent, and others, the Commissioner, I could live with that pretty well, although I'm delighted we have a new law. At any rate there is nothing that I have been able to find that says that someone is actually, perceivably, a better teacher because he has had a course in educational philosophy. I'm not saying anything against the course, because I don't think we should hold education to a one-to-one relationship to performance, I don't believe that. But, it just goes to show how ridiculous it is sometimes for the state to require something and say that that's going to make you a good teacher. I don't think that's the issue at all. So we know that we've got some questions about what we considered proper teaching in the past. But then as much as we would question that, I don't think there's much question, either in the minds of the people who have been prepared for teaching, or in the minds of those who have prepared teachers is that the practicum part of teacher education, the student teaching part, is an invaluable part of the learning experience. And, I think if you talk to beginning teachers, they will say that to. And certainly I have done this, and the research bears us out too. Wouldn't it be interesting if practice teachers, the teacher in training, in addition to having experience in the classroom, also could have experience as part of that team that I spoke of before: of administrators, teachers, students, and parents, who are trying to wrestle with some real problems, and solve some real problems in the schools. Personally, I think that would be a much more productive way for a trainee to learn the profession and be indoctrinated into the profession, than taking a series of courses which at best, we have to question in terms of effect on performance. Wouldn't this also be an interesting way to begin to get at the question of not what happens to the new teacher as a student teacher, but as a student teacher who gets his or her first job of teaching and is on the job for the first and second year could not the in-service education that I speak of, be tied into that first and second year experience. So the teacher doesn't just feel, in effect, "dumped" in the classroom. But rather, once dumped in the classroom that her institution or his institution is coming along with additional contracts, additional support, and additional in-service education that takes place not before you get your degree, but after you get your bachelor's degree. I think in addition to getting student teachers involved in this providing follow-up work with the teachers once they get on the job, that this kind of in-service, pre-service link would have a healthy effect upon the faculty of institutions of higher education. And I don't say that in any way a derogatory sense, but I do feel that all of us need to constantly be putting our feet back into the actual situation that we're studying and doing our research on. I think having a chance to go into that consulting relationship that I speak of would be a chance for faculty to, in effect, renew themselves, much as the people of the business schools of our various institutions renew themselves as consultants to major industries. Renew themselves not just intellectually, but financially, I might add. I think we would also find in this approach that we would find ourselves making much more use of what might be called clinical faculty; that is, faculty already in the schools. Teaching in our elementary and secondary schools, who on in-service education can be a better resource than anybody who comes from around campus. And in pre-service education already, I believe, as you know have been proving themselves as excellent adjunct faculty for the undergraduate preparation of teachers. Now, we have in Massachusetts, in addition to our uniqueness, something which is not unique to our Commonwealth. That is what I call, the "it can't be done" syndrome. The "it can't be done" syndrome could be summarized in terms of these three points: faculty won't do it or can't do it; there are no dollars for this; the teachers don't want it. Let me go back on each of those for a moment. The faculty can't or won't do it - I thought that might be true when I first gegan thinking about this. So I decided, dumb Irishman that I am, that I would go and meet with some faculty and broach them on it. So I did. I went and met with a group in Massachusetts, which is representative of the heads of the departments of education in most of our institutions - private and public - in the Commonwealth of Massachusetts. I presented these views to them, and then I said, "I'm not too sure that what I'm describing you can do. then I held my breath and figured oh boy, I'm going to get it now. Their reactions were, "that's right, but that is a good thing for us to do. We would like to try it; we'd like to get help to get ready for it;" and a whole series of things came flowing from them. In other words, I got a very positive reaction from those who would be most likely to be negative towards what I had to say on that particular point. I might add that I suspect that reaction might not have necessarily been the same two or three years ago. But I think all of us are facing the realities now, including those of higher education, of declining enrollments and the choice of either a new source of enrollments or taking budget cuts. The second point - no dollars. I met last night with the State College Presidents in what I thought was going to be a very brief and somewhat perfunctory meeting. We spent about three and one half hours together and got into a very good discussion, I felt, about this whole issue that I'm talking with you about today. The key question the presidents would be concerned with I might say as superintendents and commissioners are is where do we get the dollars for this. How do we do it? Well, there are two things we can do. First of all, I've already mentioned that increasingly in school districts, as a result of the collective bargaining process, school districts are being required to pay for the further education of their teachers. They must put dollars in the budget for this purpose. Now they have a choice: the teacher goes and takes six credits at some university or college; the school district has to pay for them. On the other hand, if we could find out some way for the college or university to come to this school, and work out a problem in that school don't you suppose that the school committee's attitude and the administration's attitude would be a lot different about that expenditure of money. I can assure you that the town meeting's attitude would be different about that expenditure of money. So there is already a dollar amount in school district budgets for in-service education. It's an increasing amount; but right now it's generally unrelated to local problems. I think if we could find a way of relating that education to local problems, we would not only find a positive attitude towards dollars, but an increase in those dollars. On the state college and the university side, and I have to for the moment, at least, speak of the state institutions, it is possible to take your existing tuition mechanism and use that for providing in-service education. I have down in my notes here that I refer to this as... "Anrig's tuition machination", but then I talked to the state college presidents last night, and I feel much better about it. I think they have been machinating as much as I've been machinating. It's not quite as much heresy as it would seem. Let me just give you an example of what might be the case. At the present time, if a student goes to a college campus and it's a state institution, the state subsidizes that education, that's low tuition rate of your state institutions. I believe, just as that is valid, that the off-campus training of teachers in our public schools also is as deserving of state subsidization. Now let's say that we can get people convinced about that and you come to me from a college and say we're prepared to help you with some of your problems in an in-service program. And I say to you, "I'm willing to pay something for this." And you say to me, "Look, for every sixteen people--every sixteen full-time equivalent enrollees that I get in my school, I get a faculty position. Let's say that an average faculty salary costs $15,000. For every sixteen full-time equivalents I get, I get $15,000 in my budget. You pay me $300 tuition times sixteen - that's $4,800. You pay me $4,800; that satisfies all the state treasurers, the controllers, everything else - the money's coming in and it goes to the treasury - that satisfies them. It also credits me with fifteen full-time equivalent students for which I receive $15,000. Now, maybe because of overhead I can't give you all of the $15,000, but I'll give you $12,000. Twelve thousand dollars worth of services for tuition payment from the school district of $4,800 .

Now just think about that a little bit. Put it down on paper, go home and think some more about it, and the college presidents are thinking about it a little bit and maybe the twain shall meet. In the meantime I'm goint to go on talking about it everywhere I can. With the legislature and in some other places and maybe we can develop what someone might call "readiness" for it. But it can work. I do believe it's workable. And it's not asking for new money or money in different ways than it is going right now. But it would help establish a principle that in-service training of teachers is just as deserving of State subsidy as on-campus training. The final point is that the teachers don't want it. That's just not true and I can give you a personal experience on that As Jim Hammond mentioned, before I became Commissioner I was working at the University of Massachusetts on their Boston campus. And we were doing training of teachers. One of the most difficult schools in the City of Boston is English High. I think many of you are familiar with English High School. Eighty-eight percent black school with a senior faculty that has been there since the school had a much different student composition. Different both racially, socioeconomically, in terms of aspirations for the future. That is a difficult school with some real problems.

We came and tried to do, tried to practice, what I'm in effect preaching here today. We asked these teachers to come at 4:00 in the afternoon, and we couldn't offer any credit for it; the liberal arts faculty wasn't about to give credit for anything called education (which I'll talk about some other time.) But, at any rate, we were not giving credit for it; they were not getting paid for it; the union was agreeable to this but it was actually a violation of the contract, because they were supposed to get $10 an hour for anything that takes place after school. The program was designed to go from four to around five-thirty. We never, during the whole period of time that we were working with these people, and they were tenure teachers, many of them with twenty and twenty-five years' experience, we were never able to get them out of that place by seven-thirty or nine. Now they came for nothing-- no credit, no recognition, none of the "goodies" that normally go with this kind of thing and they stayed. And the reason they stayed was because we were dealing with their problems. What we were trying to do with them was find a way to help them and that help was aimed at tomorrow, and the day after and the day after. And when they got that kind of help, they came. And they came without any of the normal incentives that one would think you have to have out there. I believe teachers do want this and I believe they will come forth, if we're competent enough to offer it. The way I conclude this is with four phrases: first, the time is right; second, we need each other; third, it's do-able; and fourth, as Henry Higgins said in "My Fair Lady," By George, Let's Do It! Thank you very much.

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Dr. Anrig comes to Massachusetts from a strong background in education. A graduate of Western Michigan College and the Harvard Graduate School of Education, he served recently as Director of the Institute of Learning and Teaching at the University of Massachusetts. He has wide experience with schools, as principal of White Plains New York, and as superintendent of the Mt. Greylock Regional School District in Williamstown, Massachusetts. He held the office of Director of the U.S. Office of Education's Division of Equal Educational Opportunity and also served briefly in 1969 as executive assistant to the late James Allen, President Nixon's first education commissioner.

APPENDICIES

APPENDIX A

THE IGE (INDIVIDUALLY GUIDED EDUCATION) PROJECT LEAGUE

Agencies in 14 states have to date been designated by the Wisconsin R&D Center as official state dissemination agencies for the IGE concept; in Massachusetts this responsibility has been entrusted to MEC. All the professional staff members of the Center have been trained as IGE facilitators and are thus qualified to handle all training and implementation aspects of the program. Materials purchased from Wisconsin R&D and from I/D/E/A are fused by MEC to achieve the most beneficial program for LEAGUE Schools. The Wisconsin Center monitors the IGE League through a field survey coordinated by MEC. Project League is supported by the Massachusetts State Department Bureau of Curriculum and Innovation with Title III Funds (ESEA); while the entire funding of the Center was initially supported by Title III, the IGE League is now the only project supported by this source. The project is further supported by payments by each IGE school, which covers training programs and additional services by Center project staff.

IGE is described as an organizational decision making structure for individualizing instruction. It is achieved through an in-service program which trains school staff for organizing the school in the multiunit structure and for integrating such concepts as team teaching and the nongraded classroom. Once the organizational structure has been established, a wide range of curriculum components, materials and methods can be incorporated to achieve individualized instruction.

It has been the Center's observation that some of the IGE schools make more frequent use of Center products and services than do other schools in the region; it is suggested that this can be credited to the more open organizational and decision making structure. Calls to the Center for information are more likely to come from teachers and principals in IGE schools than from equivalent personnel in other schools, where requests are generally channeled through the Information Representatives. The IGE schools are further served by the Director of the project, Dr. Leslie C. Bernal, who personally delivers IGE materials directly to the schools.

The "League" concept, initiated by Goodlad in California, has been modified in the IGE model to include the information component, but the major function of the League is to provide mutual support among systems embarking on a course radically different from surrounding schools. The support and exchange among IGE schools is evident both at the local and at the national level. Locally the interchange and exchange of personnel among IGE schools is a prime example. In addition, the IGE principals meet regularly at the Center, as do the elected representatives to the HUB committee. Ideas generated by HUB committees across the country have been assembled into documents and made available to all IGE League schools. In this sense a national network of "creative schools" has been formed.

As the IGE schools build their own internal problem-solving capacity, the innovation evolves to the stabilization stage where a need for Center coordination diminishes. The MEC has thus encouraged the formation of additional IGE Leagues in Massachusetts and is now in the initial stages of developing a middle school IGE League in the Merrimack region and a League of eight elementary schools in central Massachusetts. The Center hopes to be able to maintain an exchange economy within IGE projects ; once a League is thriving on its own and Center support is no longer needed, the annual fee declines. The Center must therefore balance its own staff resources against the need to establish new Leagues to maintain the economy.

The Center must in fact examine its total resources in terms of its responsibility as the official IGE disseminator in Massachusetts. If the IGE model is superior to the traditional school organization, perhaps all schools should be encouraged to adopt this model. Since the present IGE League represents less than 10% of schools within the Merrimack region a full change-over to the IGE model within the region, let alone in the state as a whole, would require a drastically modified implementation procedure. Obviously, if MEC continues to expand its operations throughout the State as an IGE disseminator, the size and character of the Center will be radically altered.

(Reprinted from the MEC Case Study, August, 1973, by Ronald and Mary Havelock).

INDIVIDUALLY GUIDED EDUCATION

Massachusetts Communities Implementing Programs at Various Levels

M.E.C. Direct Facilitating:

Project LEAGUE (Elementary) 1971

Andover (2)
Chelmsford (2)
Fitchburg (McKay)
Lawrence
Littleton
Methuen (2)
Tewksbury
Tyngsborough
Westford
Wilmington (2)

Northeast League (Elementary) 1974

Lawrence (4)
Topsfield (2)
Tyngsborough
Woburn
Burlington

Demonstration League (Middle/Junior High) 1973

Fitchburg (McKay)
Woburn (JFK)

Fitchburg State College

Central League (1973)

Fitchburg
Keene, N. H.
Leominster
Marshfield
Sturbridge

Project SPOKE (Norton, Mass.)

Southeast League (1974)

Attleboro
Braintree
Easton
Fall River
Foxborough
Mansfield
Norton
Sandwich
Mashpee

APPENDIX B

" NEW PARTNERSHIPS IN TEACHER EDUCATION"

November 28, 1973
(sponsored by Merrimack Education Center)

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Dr. Melvin Howards, Ch. Dept. of Curriculum & Instruction
Dr. Harold Miner, Professor of Education

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APPENDIX C

MICROTEACHING

An Analysis Paper Prepared by
TEXAS INFORMATION SERVICE

DEFINITION

Microteaching may be most succinctly defined as a teaching situation which is scaled down in terms of lesson time and number of pupils. Usually this means four- to twenty-minute lessons for three to ten pupils. Frequently the microteaching session is followed by immediate feedback from video- or audiotape replays, supervisors, pupils, colleagues, or self-perception. Some variable aspects of the microteaching technique include lesson length, number of reteaches (after feedback), amount and kind of supervision, the use of video- or audiotape recordings or neither, and the number and types of pupils.

DEVELOPMENT

The microteaching concept was developed at Stanford University as a School of Education preservice training device. It began with a simulated demonstration lesson; one student "taught" a brief lesson to several fellow students who acted as "pupils." The technique was modified to become a short practice lesson using "real" pupils which the prospective teacher actually taught. Finally, the teaching techniques dimension was introduced. The developers of the program found that in this manner skills could be added one at a time to an individual's repertoire, thus increasing his versatility and flexibility in the classroom. Microteaching has since been used extensively in inservice as well as preservice programs as a device for improving teaching techniques.

THE STANFORD MODEL

The Stanford University preservice microteaching program involves the following process:

1. A set of specific teaching skills is studied by the intern.
2. The intern attempts to apply these skills in a short lesson (5-10 minutes) with four to five pupils.
3. The lesson is recorded on videotape and the intern watches a replay immediately after completing the lesson.
4. During the replay his supervisor gives the intern specific feedback on his performance.
5. The intern then replans and reteaches the lesson.

ADVANTAGES

When compared to the usual pre- and inservice training program microteaching is advantageous in several respects:

1. Specific rather than general skills are taught.
2. The teacher learns through direct experience, by doing rather than by listening.
3. The small group and short lesson provide an encouraging environment for teacher change.
4. The teacher gets immediate feedback from videotape replays or supervisor critiques.
5. The teacher gets immediate reinforcement from his own performance, revising and reteaching the lesson, and noting changes in pupil behavior.

RATIONALE

Rationales for the use of microteaching as a teacher training device have been set forth by several authors;

1. Microteaching involves training through actual experience. It is *real teaching* with real pupils. (Allen and Ryan, 1969).
2. The microteaching process *reduces the complexities* of normal classroom teaching. This allows the teacher to concentrate on the acquisition of specific skills. (Allen and Ryan, 1969).
3. Through the feedback portion of the microteaching process, the teacher and/or supervisor *acquires direct, objective information* about the performance. (Meier, 1968).
4. The microteaching process *allows for the trainee's capacities*. He may select the content of the lesson from the area of his greatest competence. (Meier, 1968).
5. The use of microteaching *permits greater control* over the trainee's environment with regard to pupils, methods of feedback, supervision, etc. (Allen and Ryan, 1969).
6. Microteaching, because of the short time span and few pupils, is a *low threat situation* in which to practice teaching skills. (Allen and Clark, 1967).
7. A microteaching encounter constitutes a *low risk situation* for both teacher and pupils. Since this small group is not part of the regular class activity, the pupils are not under pressure to learn. The teacher need not fear failure for the same reason. (Allen and Clark, 1967).
8. The *active participation* that microteaching makes possible provides the trainee with an opportunity to perfect skills before taking them to the classroom. (Meier, 1968).
9. Microteaching allows for the repetitive practice needed to *overlearn skills* that will be used in teaching. (Meier, 1968).
10. Most microteaching programs incorporate *spaced or distributed practice* of a skill over a period of time. This kind of practice makes learning more thorough. (Meier, 1968).

Transfer of Skills Learned Through Microteaching

Research evidence indicates that skills learned in the microteaching environment transfer to a significant degree to the regular classroom and persist for several months with little or no regression (Borg, *et al.*, 1968 a&b). Bush (1966) found that performance in a microteaching situation can accurately predict subsequent classroom performance.

Effectiveness Compared to Other Training Programs

Research evidence shows that microteaching achieves changes in teacher behavior more rapidly than does student teaching or intern teaching (Kallenback and Gall, 1968).

Cumulative Nature of Skills Learned Through Microteaching

According to Borg's (1969) research, the microteaching format of teach-critique/reteach-critique can bring about positive changes in teacher behavior. These behavioral changes accumulate to result in a larger repertoire of teaching skills.

Feedback

Research indicates that the feedback dimension is probably the crucial one in changing behavior. While the immediacy of feedback is apparently not crucial in some instances, it does seem beneficial in many cases. Since the trainee is unlikely to remember for long the details of his performance, immediacy is important if the feedback is provided in the form of a supervisor's or observer's comments. If, however, the session is videotaped, it may be "recreated" at any time; videotape feedback thus need not be immediate. The most powerful form of feedback seems to be a combination of supervisor comment, videotape replay, and pupil feedback. (Berliner, 1969).

The Instructional Model

In order to present the trainee with an example of the teaching skill he is asked to exhibit, microteaching programs customarily employ symbolic and/or perceptual models. The symbolic model is a verbal description of desired behavior while the perceptual model is an actual visual example (usually a filmed or live model teacher). Research shows that for certain skills a perceptual model is more effective in causing change in teaching behavior, while in other cases evidence is inconclusive. (Orme, 1966). Perceptual modeling may have no advantages over symbolic modeling in instruction dealing with skills that can be easily described. It was proved, however, that a perceptual model that demonstrates positive instances of desired behavior, rather than a mixture of positive and negative instances is more powerful in enhancing a trainee's ability to acquire the skill. (Berliner, 1969).

TEACHING SKILLS

Listed below are fifteen identified teaching skills which have been analyzed into component behaviors. Training procedures which use a microteaching format have been developed for each skill. (The list is taken from *PREP-17, Microteaching*).

1. Fluency in Asking Questions. The emphasis is on the teacher asking as many questions as possible during the lesson. This skill is practiced in order to develop a new teaching pattern in the classroom for the teacher who tends to depend too heavily on the lecture method. Having achieved this goal, emphasis can be placed on higher order or divergent questions.

2. Probing Questions. Probing requires that teachers ask questions that require pupils to go beyond superficial "first-answer" questions. This can be done by asking pupils for more information and/or meaning; requiring the pupil to rationally justify his response; refocusing the pupil's or class's attention on a related issue; prompting the pupil or giving him hints; and bringing other students into the discussion by getting them to respond to the first student's answer.

3. Higher Order Questions. Higher order questions are defined as questions which cannot be answered from memory or simple sensory description. They call for finding a rule or principle rather than defining one. The critical requirements for a "good" classroom question is that it prompts students to use ideas rather than just remember them. Although some teachers intuitively ask questions of high quality, far too many over-emphasize those that require only the simplest cognitive activity on the part of the students. Procedures have been designed to sensitize beginning teachers to the effects of questioning on their students and to provide practice in forming and using higher order questions.

4. Divergent Questions. These questions are characterized by the fact that there are no "correct" answers. They are usually open-ended questions. They require the students to think creatively, to leave the comfortable confines of the known, and to reach out into the unknown. They ask students to make hypotheses and use their imaginations to reorganize concepts into novel patterns.

5. Reinforcement. An incentive skill used by the teacher to reward students for proper behaviors. The skill focuses on the teacher's use of positive reinforcement to increase student participation in classroom discussions.

6. Recognizing Attending Behavior. A skill designed to sensitize and alert the teacher to what is going on in his classroom by observing the cues his students present. By observing their facial expressions, body postures, activity- or non-activity- directed behaviors, and conversations, the teacher can tell a great deal about their interest level and attention span. From these cues the teacher can make judgments about whether to continue the activity, change it, slow down, speed up, or use a different mode of instruction. Recognizing student attending behavior is a prerequisite for almost any kind of classroom instructional or management decision.

7. Silence and Nonverbal Cues. This skill is designed to allow the teacher to control and direct classroom discussions without talking. Nonverbal communication is one of the most neglected means of teacher-student communication, but one of the most powerful. The skill focuses on the controlled use of teacher silence to get students to speak and on techniques of nonverbal communication.

8. Cueing. This skill is designed to give the teacher much more control over the success experience a student has in answering a question or in making a comment. By cueing him ahead of time and through the kinds of cues given, the teacher can greatly increase his chances of making a worthwhile contribution to the class.

9. Set Induction. This skill is concerned with properly preparing students for some upcoming activity. It includes an interesting and/or novel way of introducing the activity and establishing common frames of reference between the teacher and students in order to facilitate communication. It is basically an initiating activity by the teacher.

10. Stimulus Variation. This skill deals with both verbal and nonverbal techniques of stimulating students in order to preclude boredom and apathy in the classroom. It is basically concerned with the teacher varying his behaviors in order to keep the students attentive and alert.

11. Closure. This skill is complimentary to set induction. It consists of teacher activities that will help the students perceive a logical organization of the main ideas and pieces of factual information presented in the lesson. In addition to pulling together the major points and acting as a cognitive link between past knowledge and new knowledge, closure provides the pupil with a needed feeling of achievement.

12. Lecturing. Training in some of the successful techniques of lecturing is the focus for this skill. Delivery techniques, use of audiovisual materials, set induction, pacing, closure, planned repetition, and other skills related to lecturing are included. Rather than saying that lecturing is bad as an instructional technique, this skill tries to consider when it is effective to lecture and how to lecture effectively.

13. Use of Examples. The use of examples is basic to good, sound, clear teaching. Examples are necessary to clarify, verify, or substantiate concepts. Both inductive and deductive uses of examples can be used effectively by the teacher. Effective use of examples includes starting with simple examples relevant to students' experience and knowledge; relating the examples to the principles or ideas being taught; checking to see if the objectives of the lesson have been achieved by asking students to give examples which illustrate the main point; using analogies and metaphors to relate the unknown with the known or to liven up the examples.

14. Planned Repetition. The purpose of this skill is to clarify and reinforce major ideas, key words, principles, and concepts in a lecture or discussion. The use of planned repetition is a powerful technique in focusing and highlighting important points and in describing them from different points of view. Improper use of this skill can cause confusion and poor learning among students, while proper use can direct their attention to points which the teacher wishes to emphasize. The skill focuses on techniques of literal repetition--simple repetition, spaced repetition, cumulative repetition, and massed repetition.

15. Completeness of Communication. Although the importance of and need for clear communication are blatant, clarity is not often the guiding principle in actual communication. Sensitivity training on the importance, and the difficulty of being understood is the focus of this skill. A classroom game has been devised which dramatically demonstrates to teachers that what they consider to be clear instructions are often not clear at all to the students. Sensitivity training in the skill of communicating with others will hopefully produce teachers who are more responsive to possible miscommunication.

USES OF MICROTEACHING

Inservice Training

Several uses of microteaching for inservice teachers include microteaching (1) as a tool for improving teaching skills, (2) as a trail framework for team presentations, (3) as a site for ascertaining the proper instructional level of materials, (4) for pre-employment prediction, and (5) for training supervisors to evaluate beginning teachers.

Preservice Training

One of microteaching's major uses to date has been in training student or intern teachers.

Microcounseling

A process was developed at Colorado State College, Greeley, which allows trainees to systematically practice counseling skills such as attending behavior.

Supervisor Training

A clinic at Whitman College, Walla Walla, Washington, proved microteaching worthwhile for supervisor training in many skills.

Training College Teachers

A professor at the University of Illinois found microteaching helpful in assisting college teachers.

Peace Corps Training

Microteaching has proven effective and efficient in accelerated Peace Corps teacher-training programs.

LIMITATIONS

Although microteaching appears to be a promising device for training teachers in a number of classroom skills, it should not be taken as a panacea for all teaching problems. Listed are some limitations of microteaching in its current form.

1. Microteaching does not provide the teacher with training in the *appropriate use of identified skills*. Simply increasing exhibitions of a behavior will not make one an excellent teacher. Rather, successful teaching depends upon an orchestration of many skills. (Borg, *et al.*, 1970).
2. The *value of identified teaching skills* to be increased through microteaching must be clearly established. That teachers can be trained to acquire certain behaviors is known, but little information exists regarding how these behaviors affect pupils. (Cooper and Allen, 1970).
3. No information concerning the *optimal learning sequence* for the various skills is presently available. This sequence may even vary greatly from trainee to trainee. (Cooper and Allen, 1970).
4. *Skills need to be systematically identified.* Those teaching skills identified to date have been named in a rather haphazard fashion (Cooper and Allen, 1970).

Content of this paper is based primarily upon:

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References throughout this paper are to the "Bibliography on Microteaching" included in this package.

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APPENDIX D

ERIC DOCUMENTS ON COMPETENCY BASED TEACHER EDUCATION

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M.E.C. Bibliography
on
COMPETENCY-BASED TEACHER EDUCATION

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ERIC DOCUMENTS
ON THE
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APPENDIX E

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on

INDIVIDUALLY GUIDED EDUCATION IN THE MULTIUNIT SCHOOL

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For more information on Individually Guided Education in the Multiunit School, contact

Merrimack Education Center
101 Mill Road
Chelmsford, Massachusetts 01824

APPENDIX F

INDIVIDUALLY GUIDED EDUCATION

IGE features the multiunit organizational structure, a model of instructional programming for the individual pupil, a model for measurement and evaluation, a program of home/school communications, and continuing research and development.

IGE is unique among the systems presented on the accompanying chart because it demands the restructuring of the school organization. Instruction of pools of different aged children becomes the responsibility of units or teams of teachers. Multiunit combines theory and practice regarding instructional programming for individual students, horizontal and vertical organization for instruction, role differentiation, shared decision making by groups, and open communication.

The multiunit program requires distinct changes in the roles of the principal and teacher. The principal assumes greater and more direct responsibility for developing improved educational practices, managing the preservice and inservice teacher education activities in his building, and administering research and development activities. IGE has established one new position, that of unit leaders or lead teachers, a career teacher who chars unit meetings and performs a liaison function between the team and the principal, consultants, and parents. Other instructional unit members are professional teachers, the teacher aide, an instructional secretary, and one or more interns.

The IGE system attends to differences in a child's rate and style of learning, level of motivation, and unique educational needs. Curriculum materials are geared to the instructional objectives as they are selected by the staff for each child, based on his characteristics as a learner. This, of course, requires that information concerning pupil characteristics be utilized in curriculum decision making.

IGE provides a design for measurement and evaluation that includes pre-assessment of the child's readiness, assessment of progress, and final achievement. Tests inform both the child and the teacher regarding the attainment of learning objectives. IGE also attends to home/school communications to ensure that the school's efforts are reinforced by the interest and encouragement of parents and other adults.

IGE CURRICULUM. IGE program materials are available in reading, mathematics, and motivational procedures. *The Wisconsin Design for Reading Skill Development. WDRSD* specifies an array of reading skills essential for competence in reading, assesses pupils' skill development through criterion-referenced tests, provides a management guide for grouping and for planning instructional activities, and provides a guide for monitoring each pupil's mastery of reading skills. WDRSD has been developed around six reading skills areas: word attack skills, comprehension skills, study skills, self-directed reading skills, interpretive reading skills, and creative reading skills. WDRSD is available commercially from National Computer Systems, Inc., Minneapolis.

DEVELOPING MATHEMATICAL PROCESSES. DMP is a complete mathematics program for the elementary school which includes, in addition to the usual topics in arithmetic, an informal, intuitive introduction to major ideas of geometry and probability statistics. DMP is activity oriented and will include 12 curriculum packages: eight for mathematics instruction, two for geometry, and two for probability statistics. The teacher's guide is not prescriptive in nature; rather, the teacher is encouraged to experiment in adapting activities to particular characteristics of students. DMP is available commercially from Rand McNally, Chicago.

INDIVIDUALLY GUIDED MOTIVATION. IGM provides systematic procedures for structuring goal-setting conferences, guiding children as peer tutors, structuring independent reading conferences, and developing pro-social behavior. It is being field tested nationally. IGM information is available from the R & D Center for Cognitive Learning, University of Wisconsin, Madison.

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IGE EVALUATIONS. Inasmuch as IGE curricula are at different stages of field testing, evaluations have been reported in terms of the extent to which each program has attained its goals. For example, WDRSD field tests have indicated that children at a normal IQ range may be expected to master word attack skills by the end of their sixth year of school; children at higher IQ ranges (110-140) of course will have mastered these skills by the fourth or fifth year of school.

DMP was field tested nationally, K-2, during the 1972-73 school year. Preliminary results of one field test indicate that children's achievements in mathematics equaled or exceeded expectations of this prototypic mathematics program. Also, teacher attitudes toward both teacher and student materials were very positive.

A field test of IGM indicated that children's achievements in mathematics, reading vocabulary, and word attack increased significantly after goal-setting conferences. Further, these children continued their high achievement even after the conferences were discontinued.

Roderick Ironside indicates that IGE, as a total model, was adopted and adapted to varying degrees by schools in his sample. Schools, in some cases, adapt only those parts of IGE which fit their particular needs and/or resources.

In terms of Jack Edling's model, IGE seems to fit into all of the identified categories, with heavier emphasis on Diagnosed and Prescribed Learning and Self-Directed Learning than on Personalized Learning and Independent Study. A major distinction between IGE and IPI is that IGE leaves most instructional decisions in the hands of the teachers ; IPI materials are more prescriptive; thus teacher decision making is minimized.

EDLING's MODEL

MEDIA	OBJECTIVES	
	School-Determined	Learner-Selected
System determined Learner Selected	Individually Diagnosed Individually Prescribed Self-Directed	Personalized Independent Study

Three programs for individualized instruction were selected here for comparison in the following chart. IPI depends to a great extent on programmed materials and thus is characteristic of programs employing that method. PLAN is a computerized program. IGE is built around a plan for school and staff organization. It depends on materials developed by local school staffs or materials commercially available such as the Wisconsin Design for Reading Skill Development. (This material obtained from Texas Information Service) to prepare chart)

	IPI	PLAN	IGE
Target audience	Elementary students of all ability levels (K–6)	Students of all ability levels (1–12)	Elementary students of all ability levels (K–6); Middle School IGE (ages 13–15)
Subject Area	Math and reading. Science, spelling, and handwriting are being developed; social studies course is planned.	Math, science, language arts, social studies, and guidance	Any subject area the school selects.
Instructional Method	Independent work with programmed material; individual and small group learning; tutoring; peer tutoring	Independent work with programmed material; individual and small-group tutoring; small group discussions; peer tutoring	Independent , large-and small group activities in accordance with the student's own objectives. Takes into account his beginning level of performance, rate of progress, style of learning, etc.
Student : Testing	Pre- and posttest for each learning objective.	Placement test; test after each TLU; test after predetermined number of modules.	Pre-test, criterion-referenced post-tests. Some norm-referenced tests.
School Organization	Nongraded system which allows for different rates of learning	Nongraded	Nongraded, multi-aged; grouped into units of 100 to 150 pupils (Multiunit elementary school.

	IPI	PLAN	IGE
Student's Role	Student's primary activity is working with programmed material.	Students help determine instructional objectives and procedures.	Identifies learning goals; chooses materials and activities.
Equipment and Facilities	Resource center, shelves. Language master; Assman Sound Disc machines.	Computer terminal and space. Storage space; hardware and software of various types.	Audiovisual equipment ; all materials keyed to objectives. Areas for large and small group work.
Program Evaluation	Data on student achievement and attitudes available.	Limited data on student achievement available.	Data on student achievement and teacher attitudes available.
Availability	Math and reading now.	Grades 1-3 and 5-11 are now available. Grades 4 and 12 under development.	Staff development and program planning materials now available. The R&D Center's math program and reading program (word attack skills) available.
Costs for indicative purposes only	Reading $7.88 per pupil for consumable materials; math - $10.00 per pupil for consumables; supplementary materials and machines additional.	$100.00 per student.	$10.00 per pupil for first two years. Materials and equipment for resrource center.

APPENDIX G

INVITATIONAL

CLINICAL WORKSHOP

IN

INDIVIDUALLY GUIDED EDUCATION

FOR

LEAGUE FACILITATORS--AND--PRINCIPALS

OF

JUNIOR HIGH AND MIDDLE SCHOOLS

STUDENTS AGED 10 - 15 YEARS

conducted by

The Institute for Development of Educational Activities
(an affiliate of The Kettering Foundation)
Suite 300, 5335 Far Hills Avenue
Dayton, Ohio

and

The Merrimack Education Center
101 Mill Road
Chelmsford, Massachusetts 01824

January 26 through February 8, 1974

John Fitzgerald Kennedy Memorial Junior High School
Woburn, Massachusetts 01801

INTRODUCTION

The Invitational Clinical Workshop is an intensive experience designed to prepare league facilitators and principals of junior high and middle schools for implementation of the I/D/E/A - developed plan for Individually Guided Education (IGE). This is the first such workshop to be held in New England. It follows the training of Massachusetts educators at the National Facilitator's Clinical (Gainesville, February, 1973); the National Principal's Clinical Workshop (Dayton, May, 1973); and the Regional Principal's - Learning Community Leaders Workshop (February, August, 1973).

The I/D/E/A model of I.G.E. is authorized for use only by those who have been trained at these national clinicals or authorized local clinicals. The philosophy of the I.G.E. model directs that the trainees be given several days of theoretical training, followed by a clinical practice period of time when they actually work with students. Thus, training in individualization of instruction, peer teaching-observation methods, advisor-advisee relationships, and learning design, is implemented in an operational setting. The entire clinical program is designed based upon the thirty-five outcomes which constitute the focus of the I.G.E. Middle School program. Trainees are verified in their comprehension and demonstration (as is possible) of these outcomes before the termination of the workshop.

Due to the intensity of the workshop, trainees are encouraged to take advantage of the overnight motel accommodations available to participants. Moreover, trainees indicate in advance their intention of completing the activities designed for the clinical workshop.

PARTICIPANTS

Participants in this Clinical Workshop will be limited to the following groups of personnel:

a. Those educators designated as potential league facilitators from all New England who will be recruiting and coordinating a league of I.G.E. schools. This limited group will be from universities, colleges, and regional educational centers. Approximately 10 are anticipated.

b. Those principals of 4-5 buildings in the MEC region identified by their districts for IGE-Middle implementation in September, 1974.

c. Those principals from outside the MEC region, including out-of-state educators, who have been designated and recommended by any of the 14 National Facilitators and/or the I/D/E/A - Kettering Staff officers. (This number is limited according to the availability of participants from the area in the Clinical.)

WORKSHOP

The workshop will follow this general format and set of objectives.

Goal. The workshop goal is

TO DEVELOP A PLAN FOR IMPLEMENTING IGE IN ALL PARTICIPATING LEAGUES AND SCHOOLS.

Objectives. The objectives of this Clinical are that the participants will be able to:

a. Be knowledgeable of and conversant with the 35 Outcomes of Individually Guided Education;

b. Implement a positive advisor-advisee relationship with students;

c. Plan and implement an individualized learning program for students aged 10-15, providing an interdisciplinary environment utilizing varied student options in achieving established objectives;

d. Implement a system of positively observing, analyzing, and critiquing an observed teaching/learning environment;

e. Assess the achievement of IGE Outcomes;

f. Develop a thorough use of the Implementation Guide; and;

g. Organize and operate a Clinical Workshop for training teachers (Learning Community Leaders) in Official Project Schools.

ACTIVITIES

There will be five (5) days of planning and preparation.

a. A "school" will be formed consisting of two learning communities of approximately 7-8 members. The Learning Communities will each be overstaffed in order to allow the Community to achieve easily the informal continuous improvement cycle objectives and other tasks. The school will be administered by a Principal and Assistant Principal (trained already by I/D/E/A). The Principal will designate Learning Community Leaders. Trained I/D/E/A Facilitators will act as League Resource Personnel.

b. Short course sessions will be given to enable participants to verify their knowledge of I.G.E. Outcomes.

c. The Learning Communities (L.C.) will utilize the planning system to develop a learning program for students.

d. Advisors (participants) working with their advisees (students) cooperatively plan and assess the learning program in which students will be involved during the workshop.

There will be seven (7) days of teaching while utilizing the continuous improvement cycle. This cycle will include both formal (intercommunity) and informal (intra-community) methods.

In the former, or team-on-one, method each L.C. alternately (1) teaches and (2) observes and critiques. By the end of the seventh day, each L.C. member will have observed seven times and been observed once. In the latter, or one-on-one, (in addition to the formal improvement cycle) each L.C. member is expected to observe and be observed by another member of his/her L.C. at least once during these seven days.

The on-going in-service education program will assume the following proportions.

1. The Program Improvement Council (PIC) will meet daily at 2:45 P.M. This group, chaired by the "Principal," considered all matters effecting the program for the mini-school. Each participant is expected to attend at least one PIC meeting as an observer. A most important function is to coordinate in-service programs for staff. Relevant to this, each participant will be expected to view the filmstrips twice during the Clinical, and to be conversant with the contents of each print document. Also, each participant will attend at least one PIC meeting as an observer. Finally, it is expected that each participant will have verified his/her

knowledge of the 35 Outcomes of I.G.E. and demonstrated a familiarity with all print and non-print materials by the 12th day of the Clinical.

2. The participants who will serve as facilitators of leagues of schools will schedule time during the Workshop to work with Mr. Reeves of I/D/E/A and Dr. Pilecki of M.E.C. in developing plans for implementing the change program upon return to their respective areas.

ASSESSMENT

Through participation in the activities, each participant will assume evaluative and demonstrative roles, group membership and leadership functions, teaching and counseling roles, as well as planning and designing functions. These modes of learning and working occur in independent, one-to-one, small group, and large group contexts. Further, these roles and functions will be modeled in individual, Learning Community, school, and League environments. Most importantly, each participant will examine, assess and re-assess what he/she has learned about learning, change, and Individually Guided Education.

The Clinical Staff will share in the assessment of participants and will award certificates to those who successfully verify the 35 outcomes.

The Clinical School Administrative Staff will consist of:

Mr. Billy B. Reeves, I/D/E/A - Kettering Foundation

Dr. Francis J. Pilecki, MEC; Fitchburg State College

Dates and Locations

The Clinical Workshop will be held January 26 through February 8, inclusively, daily from 8:00 A.M. through 5:00 P.M. Participants must attend regularly to qualify for completion. Unfortunately, the intensity of the Clinical precludes prearranged absences, etc.

The site will be:

Kennedy Junior High School
Woburn, Massachusetts

ACCREDITATION

Participants will qualify for three semester hours of graduate credit at Fitchburg State College.

INVITATIONAL CLINICAL WORKSHOP

LEAGUE FACILITATORS AND BUILDING PRINCIPALS

Saturday January 26	Sunday January 27	Monday January 28	Tuesday January 29	Wednesday January 30	Thursday January 31	Friday February 1
Overview Begin *We Agree* workshop Short Courses: *I.I.I. #1* *I.I.I. #2* *Fourth R*	*We Agree* workshop ends Short Courses: *Planning & Management 1* *Planning & Management 2* *Many Voices* *Keeping It Together* Learning Commun. Goal-Setting	Short Courses: *Continuous Improvement* *Learners' Choice* *Planning & Management 3* *Planning & Management 4* Design Meeting P.I.C. (4:P.M.)	Short Courses: *Change with Leagues* *Planning & Management 5* *Planning & Management 6* *Special Resource Tchr.* Design Meeting P.I.C. (4:P.M.)	In School: Human Development Prog. Refine Learning Program P.I.C. (4:P.M.)	In School Human Development Prog. Implement Continuous Improvement Cycle Design Meeting P.I.C. (4:P.M.)	In-School Human De opment P Continue rovement Cycle (f mal/info P.I.C. (2 List In-S ice Need HUB (4:P.

Saturday February 2	Sunday February 3	Monday February 4	Tuesday February 5	Wednesday February 6	Thursday February 7	Friday February 8
League Program: In-Service (afternoon and evening are unscheduled)	(Morning is unscheduled) Begin evaluation of the learning materials etc. Continue work Learning Progr.	In-School Continuous Improvement Cycle Refine Program PIC (4:P.M.)	In School Continuous Improvement Cycle Refine Program PIC (4:P.M.)	In School Continuous Improvement Cycle Validation of Outcomes P.I.C (4:P.M.)	In School Continuous Improvement Outcome Validation Learning Com. begin Evaluation P.I.C. (4:PM) Social: Dinner	In School Continuous Improvemen Program Evaluatio Certificat Completion

APPENDIX H

INDIVIDUALLY GUIDED EDUCATION

by

Richard A. Rossmiller*

Individually Guided Education (IGE) is a system of education designed to produce higher educational achievement by accommodating individual differences among students in rate of learning, learning style, and other characteristics. Individually Guided Education includes seven major components which are independent but at the same time, are conceptually interrelated: (1) an organization for instruction--the multiunit school, (2) a model for instructional programming, (3) instructional materials, (4) measurement tools and evaluation procedures, (5) a program of home-school communications, (6) facilitative environments, and (7) research and development to continuously improve the system.

The Multiunit School

The multiunit school is the organizational/administrative component of IGE. It provides a new organizational pattern for instruction and a changed administrative pattern at the building and central office levels. Figure 1 illustrates these interlocking elements. Differentiated staffing, group planning and decision-making, open communication, and accountability characterize the multiunit school.

At the classroom level, the nongraded instructional and research unit replaces the age-graded, self-contained classroom. Research is included

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*The author is Professor of Educational Administration and Director of the Research and Development Center for Cognitive Learning at the University of Wisconsin-Madison.

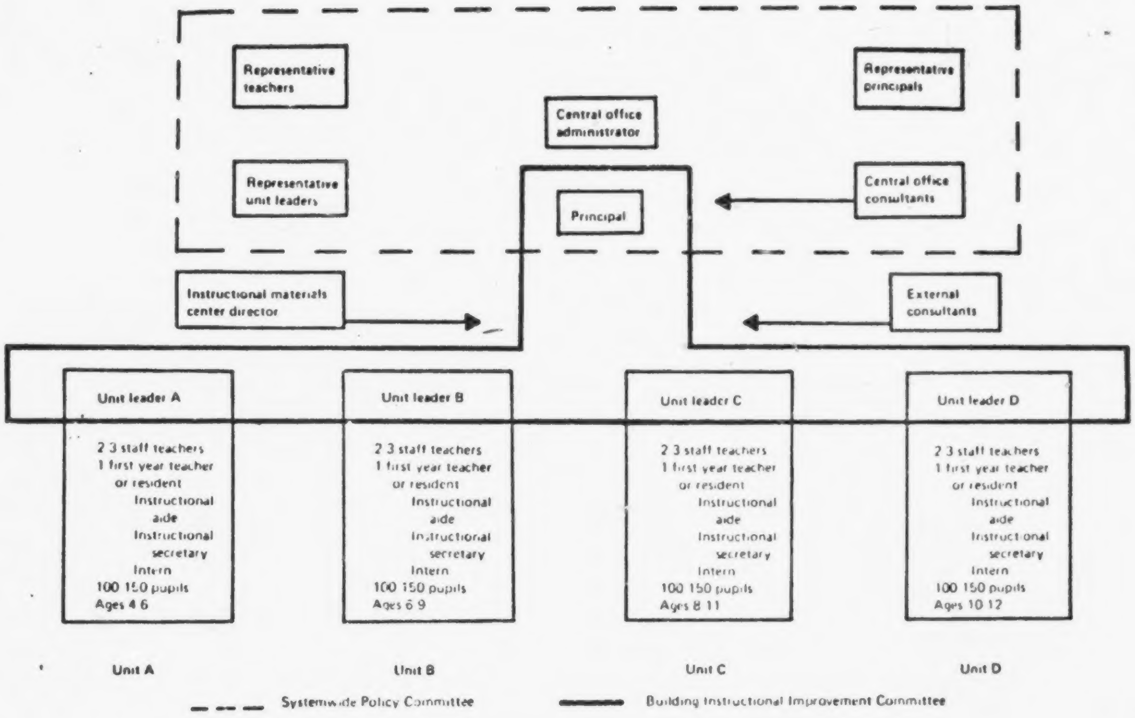
Representative teachers
Central office administrator
Representative principals
Representative unit leaders
Principal
Central office consultants
Instructional materials center director
External consultants
Unit leader A
2 3 staff teachers
1 first year teacher or resident
Instructional aide
Instructional secretary
Intern
100 150 pupils
Ages 4 6
Unit leader B
2 3 staff teachers
1 first year teacher or resident
Instructional aide
Instructional secretary
Intern
100 150 pupils
Ages 6 9
Unit leader C
2 3 staff teachers
1 first year teacher or resident
Instructional aide
Instructional secretary
Intern
100 150 pupils
Ages 8 11
Unit leader D
2 3 staff teachers
1 first year teacher or resident
Instructional aide
Instructional secretary
Intern
100 150 pupils
Ages 10 12
Unit A
Unit B
Unit C
Unit D
Systemwide Policy Committee
Building Instructional Improvement Committee

Figure 1. Organization chart of a multiunit school.

in the title to emphasize the fact that the staff must continuously engage in practical research in order to devise and evaluate an instructional program appropriate for each child in the unit. In the typical multiunit school each I & R unit includes a unit leader or lead teacher, three or four other teachers, one teacher aide, one instructional secretary, one intern, and 100 to 150 students. The children in a unit frequently have a three- to four-year age span.

The second element in the multiunit organization is the Instructional Improvement Committee (IIC). The IIC is building-wide in scope and is comprised of the principal and the unit leaders. The principal organizes and chairs the IIC and sees to it that its decisions are implemented. The committee takes primary initiative for stating the educational objectives and outlining the educational program for the school building, coordinates I & R unit activities, and arranges for the use of facilities, time, and material. The IIC deals primarily with developing and coordinating instructional functions. Although the principal's leadership responsibility is not diminished under the IGE system, he does share instructional decisions with the IIC.

A third key element of the multiunit school organization is the System-wide Policy Committee (SPC). The SPC is chaired by the superintendent and includes central office staff members and representative principals, unit leaders, and teachers. The SPC coordinates system-side activities such as planning for inservice education, providing instructional materials, and disseminating information to the community.

Unlike some differentiated staffing programs in which new roles and titles are proliferated, the multiunit school organization establishes only one new position--unit leader or lead teacher. The unit leader is not a supervisor but a career teacher who plans and coordinates unit activities. The unit leader is responsible for demonstrating new materials and for keeping abreast of research and development. As a member of the IIC, the unit leader helps plan and develop the instructional program of the building and serves in a liaison capacity between the unit staff and the principal. As unit coordinator, the unit leader is responsible for planning and implementing the unit's educational program. However, each teacher in the unit shares fully in decision-making and assumes responsibility for the programs of specific children. Unit meetings are held at least one hour a week (during school time) giving teachers an opportunity to pool their knowledge and expertise. They cooperatively plan, carry out, and evaluate an instructional program for each child.

Instructional Programming Model

A model of instructional programming for the individual student is at the heart of IGE. Ideally, each child's program will be based on how and at what pace he learns best and where he stands on mastering specific skills or concepts. Attempting to achieve this ideal involves a series of steps which are outlined in Figure 2. The R & D Center is developing curriculum materials which incorporate the instructional programing model. For purposes of illustration, the six steps in the model will be discussed as they might be used in the Word Attack element of the *Wisconsin Design for Reading Skill Development* (WDRSD), the Center's individually guided reading program.

Step 1 involves the setting by the IIC of school-wide educational objectives in reading. The terminal objective for reading might be: 90 percent of the children attain independence in Word Attack by age 10, 95

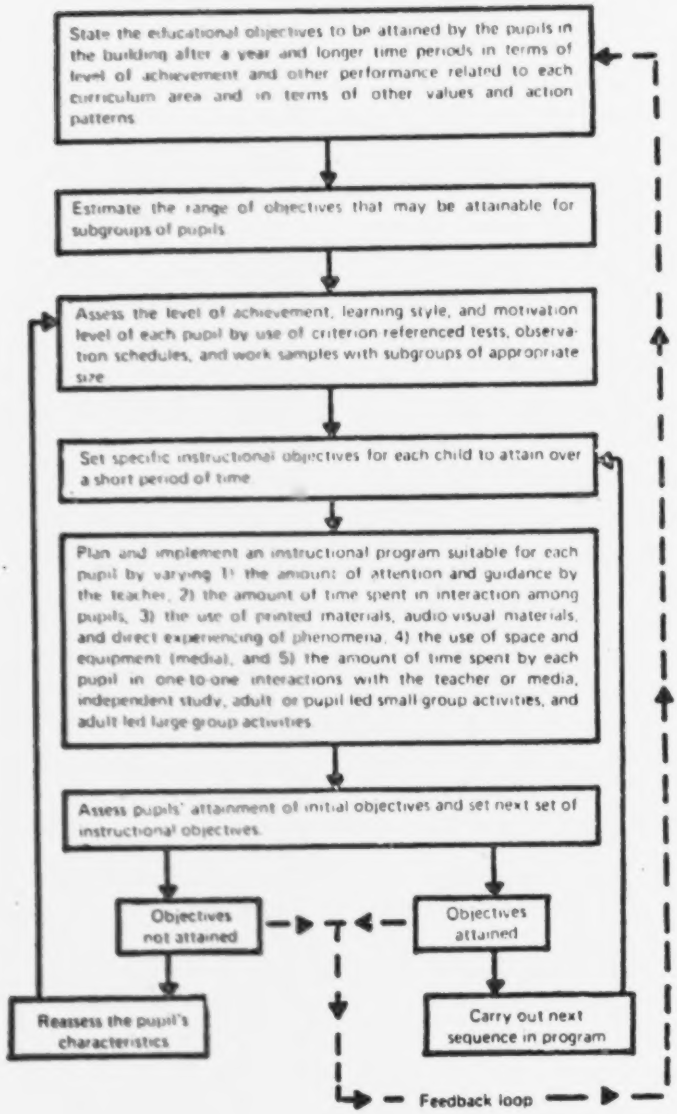
State the educational objectives to be attained by the pupils in the building after a year and longer time periods in terms of level of achievement and other performance related to each curriculum area and in terms of other values and action patterns
Estimate the range of objectives that may be attainable for subgroups of pupils
Assess the level of achievement, learning style, and motivation level of each pupil by use of criterion referenced tests, observation schedules, and work samples with subgroups of appropriate size
Set specific instructional objectives for each child to attain over a short period of time
Plan and implement an instructional program suitable for each pupil by varying 1) the amount of attention and guidance by the teacher, 2) the amount of time spent in interaction among pupils, 3) the use of printed materials, audio visual materials, and direct experiencing of phenomena, 4) the use of space and equipment (media), and 5) the amount of time spent by each pupil in one-to-one interactions with the teacher or media, independent study, adult or pupil led small group activities, and adult led large group activities
Assess pupils' attainment of initial objectives and set next set of instructional objectives.
Objectives not attained
Objectives attained
Reassess the pupil's characteristics
Carry out next sequence in program
Feedback loop

Figure 2. Instructional programing model in individually guided education.

percent by age 11, and 99 percent by age 12.

Step 2 calls for identification by the I & R unit staff on a subset of specific instructional objectives appropriate for a given group of children.

Step 3 involves the assessment of each child's level of skill development. For each behaviorally stated objective of the Word Attack element, a short criterion-referenced test has been developed and validated for use in assessing mastery or nonmastery of the skill described. This testing, supplemented with observation, indicates which of the skills each child has already mastered and which he has not.

Step 4 involves setting instructional objectives for each child in the unit. The behavioral objectives related to the skills a child has not yet mastered become his instructional objectives.

Step 5 calls for unit teachers to plan an instructional program for each child in the unit. Each teacher assumes responsibility for the instruction of certain children, who may be grouped together because they need to master the same skills. While children will be involved in several different instructional patterns in the various curriculum areas, each will receive some instruction in small groups with other children working on the same skills. The Word Attack element of WDRSD has a teacher's resource file which keys published materials and suggested activities to each of the 45 skills.

Step 6 of the model involves assessing students to determine their attainment of objectives. Once the student reaches the specified mastery level, he moves on to the next sequence of the program. If he has not mastered the skills, the unit staff takes another look at his progress and designs another program for the same or another objective.

Measurement Tools and Evaluation Procedures

A third component of the IGE system is a model for developing measurement tools and evaluation procedures. This includes pre-assessment of children's readiness, assessment of progress and final achievement with criterion-referenced tests, feedback to the teacher and the child, and evaluation of the IGE system and its components. The assessment data are used not only to plan each child's instruction, but also to evaluate whether or not the school is meeting the objectives of its educational program. Such analyses permit judgments about the effectiveness of a school's program to be based directly upon performance related to specified objectives.

Curriculum Materials

Curriculum materials, including statements of instructional objectives, criterion-referenced tests, and observation schedules, are the fourth component of the IGE system. The Wisconsin R & D Center is currently developing curriculum materials in several areas. In addition, some materials developed at other educational r & d centers and laboratories, as well as some commercial materials, can be adapted for use in the IGE system. Brief descriptions of materials being developed at the Wisconsin R & D Center follow.

The Wisconsin Design for Reading Skill Development (WDRSD) describes essential reading skills and related behaviors and provides machine-scoreable criterion-referenced tests for assessing children's mastery of these skills. The program is organized into six skill areas: Work Attack, Study Skills, Comprehension, Self-directed Reading, Interpretive Skills, and Creative Skills.

The Prereading Skills Program is designed to prevent reading failures by identifying and overcoming deficits in prereading skills at the preschool and kindergarten levels. Diagnostic tests have been developed for three visual skills (letter order, letter orientation, and word detail) and two auditory skills (sound matching and sound blending). Instructional packages to help children learn these skills include games, songs, and other activities. Informal assessment procedures and a handbook for teachers are also included.

Developing Mathematical Processes (DMP)--a comprehensive instructional and management program--integrates arithmetic, geometry, and probability and statistics to learning with IGE practices. Based on an empirical analysis of how children learn mathematics, DMP represents the first attempt to incorporate an activity approach in a carefully sequenced complete program of mathematics instruction for grades K-6. Pilot studies show that children enjoy the activity approach and learn well, and that teachers do not require lengthy inservice education to use the program. Geometry is integrated with the study of arithmetic by taking a measurement approach where children themselves generate the numbers they work with. Because they are constantly generating numerical data, children also study elementary probability and statistics as they organize and analyze these data.

Individually Guided Motivation is an inservice program designed to increase children's interest in learning and their self-direction. The multimedia inservice materials describe and illustrate how principles of goal-setting, modeling, feedback, reinforcement, and reasoning may be incorporated into the instructional program. There are four motivational-instructional procedures described in sound motion pictures and associated print materials: Setting Goals for Individual Children, Promoting Independent Reading, Tutoring of Younger Students by Older Students, and Small Group Conferences to Encourage Self-directed Behavior.

Developmental work is also well under way on an Environmental Education program. The curriculum materials developed in this program will be designed to teach environmental concepts to elementary school children within a social studies context. Upper intermediate and lower intermediate instructional packages will deal with such topics as population, pollution, land use, resource utilization, and the effects on the environment of technology and urbanization.

Home-School Communications

The fifth component of the IGE system is a program of home-school communications that reinforces the school's efforts by generating the interest and encouragement of parents and other adults whose attitudes influence pupil motivation and learning. Research and development work on the home-school communications component was initiated by the Center during 1972-73 and materials are scheduled for field testing in 1974-75.

Facilitative Environments

Facilitative environments in school buildings, school systems, state education agencies, and teacher education institutions are required in order to implement Individually Guided Education in multiunit schools and to maintain and strengthen them so that each school becomes increasingly self-renewing. A network comprised of the state education agency, local school districts, and teacher education institutions can cooperatively provide the necessary facilitative environments. (A major project to develop IGE instructional materials for use in the preservice and inservice education of teachers is currently being financed by The Sears-Roebuck Foundation.) Other groups, such as teacher associations and parent organizations, also are expected to share in policy development and implementation in the IGE system. The exact role of each agency must necessarily be worked out within each state and will vary from one state to another.

A national association of IGE schools currently is being organized by educators from those states which have made a major commitment towards establishing Individually Guided Education and multiunit schools. Twenty-five states were represented at the first annual meeting of the association. The Association for Individually Guided Education will provide a means of facilitating communication and cooperation between state education agencies, local school districts, and teacher education institutions involved in the IGE movement.

Research and Development

The seventh component of the IGE system is continuing research and development to generate knowledge and produce validated instructional materials and procedures. IGE is a dynamic system designed to change and improve through continuous research and development. The Wisconsin R & D Center is engaged in several research and development activities to further refine and extend IGE concepts. Included are studies to facilitate application of the instructional programming model, research on modes and styles of learning, development of computer applications to assist in gathering and assessing the data needed to guide the instructional programming of pupils, cost/effectiveness of multiunit schools, models for extending the multiunit organization to the middle and senior high school levels, and refinement of organizational roles and relationships in multiunit schools.

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